

CITY OF HAMILTON

PLANNING AND ECONOMIC DEVELOPMENT DEPARTMENT
Planning Division

TO: Chair and Members Planning Committee	WARD(S) AFFECTED: WARD 14
COMMITTEE DATE: September 7, 2011	
SUBJECT/REPORT NO: Application for Approval of an Amendment to the Town of Flamborough Official Plan and Zoning By-law No. 90-145-Z for Lands Located on a Portion of 834 Brock Road, Part of Lots 9 and 10, Concession 4 (Flamborough) (PED07278(b)) (Ward 14)	
SUBMITTED BY: Tim McCabe General Manager Planning and Economic Development Department	PREPARED BY: Heather Travis (905) 546-2424, Ext. 4168
SIGNATURE:	

RECOMMENDATION:

- (a) That approval be given to **Flamborough Official Plan Amendment Application OPA-07-015, by Lafarge Canada Inc, Owner**, for Official Plan Amendment No. [REDACTED] to amend the land use designation from “Agricultural” to “Extractive Industrial”, on lands located on a portion of 834 Brock Road, Part of Lots 9 and 10, Concession 4 (Flamborough), as shown on Appendix “A” to Report PED07278(b), on the following basis:
 - (i) That the Draft Official Plan Amendment, attached as Appendix “B” to Report PED07278(b), be adopted by Council.
 - (ii) That the proposed Official Plan Amendment is consistent with the Provincial Policy Statement, and conforms to the Places to Grow Plan and the Hamilton-Wentworth Official Plan.

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- (b) That approval be given to **Zoning Application ZAC-07-054, by Lafarge Canada Inc, Owner**, for a change in zoning from the Agricultural “A” Zone to the Extractive Industrial “EI-1” Zone, Modified, with a Special Exception (Block 1), and from the Conservation Management “CM” Zone to the Extractive Industrial “EI-1” Zone, Modified, with a Special Exception (Block 2), as shown on Appendix “A” to Report PED07278(b), for lands located on a portion of 834 Brock Road, Part of Lots 9 and 10, Concession 4 (Flamborough), on the following basis:
- (i) That the draft By-law, attached as Appendix “C” to Report PED07278(b), which has been prepared in a form satisfactory to the City Solicitor, be enacted by City Council.
 - (ii) That the proposed changes in zoning are in conformity with the Hamilton-Wentworth Official Plan, and will be in conformity with the Town of Flamborough Official Plan upon approval of Official Plan Amendment No. [REDACTED].
- (c) That approval be given to Rural Hamilton Official Plan Amendment No. [REDACTED] to amend the land use designation from “Rural” to “Mineral Aggregate Resource Areas”, respecting lands located on a portion of 834 Brock Road, Part of Lots 9 and 10, Concession 4 (Flamborough), as shown on Appendix “A” to Report PED07278(b), on the following basis:
- (i) That Draft Rural Hamilton Official Plan Amendment No. [REDACTED], attached as Appendix “F” to Report PED07278(b), be adopted by City Council.
 - (ii) That Rural Hamilton Official Plan Amendment No. [REDACTED] is consistent with the Provincial Policy Statement.
 - (iii) That the By-law of adoption for Rural Hamilton Official Plan Amendment No. [REDACTED], referenced in Recommendation (c)(i) above, be held in abeyance until such time as the Rural Hamilton Official Plan comes into full force and effect.
- (d) That staff be directed to notify the Ministry of Natural Resources that the City of Hamilton’s objections to the Aggregate Resources Act License Application, by Lafarge Canada Inc., for the subject lands, have been resolved; and that the City of Hamilton no longer has an objection to the issuance of a License under the ARA for the subject lands, in accordance with the ARA Site Plans, once the subject Official Plan Amendment and Zoning By-law Amendment are in full force and effect.

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EXECUTIVE SUMMARY

Lafarge Canada Inc. has applied for a license under the Aggregate Resources Act to extract aggregate from a proposed extension to the existing Lafarge Dundas North Quarry. The subject lands are a 30.88 hectare parcel located immediately east of the existing North Quarry. In addition, Lafarge has also submitted applications for an Official Plan Amendment and Zoning By-law Amendment to the City of Hamilton to permit the proposed extractive use on the subject lands.

The proposal has been reviewed by a Combined Aggregate Review Team (CART), which was formed to provide a technical review function of the studies submitted by Lafarge in support of the quarry extension application. CART was comprised of staff from the City of Hamilton, Conservation Halton, Hamilton Conservation Authority, Ministry of Environment, and Ministry of Natural Resources. In addition, peer reviews were also undertaken of the technical studies on behalf of CART.

The proposal has merit and can be supported because it is consistent with the Provincial Policy Statement, and conforms to the Greenbelt Plan and the Region of Hamilton Wentworth Official Plan. In addition, the proposal has undergone a thorough technical review by CART and the Peer Review Team. Further, appropriate provisions have been included to ensure protection of the natural environment and to minimize impacts on local residents.

Alternatives for Consideration - See Page 42.

FINANCIAL / STAFFING / LEGAL IMPLICATIONS (for Recommendation(s) only)

Financial: N/A.

Staffing: N/A.

Legal: As required by the Planning Act, Council shall hold at least one (1) Public Meeting to consider applications for an Official Plan Amendment and Zoning By-law Amendment.

HISTORICAL BACKGROUND (Chronology of events)

On August 24, 2007, Lafarge Canada Inc. applied to the Ministry of Natural Resources (MNR) for a Category 2, Class A, Quarry Below Water Licence to excavate aggregate from a proposed 30.88 ha (76.3 acres) extension to the existing Lafarge Dundas North Quarry under the Aggregate Resources Act (ARA). The subject lands are located at 834 Brock Road (see Appendix "A").

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Also in August, 2007, Lafarge submitted applications to the City of Hamilton for an Official Plan Amendment (OPA) under file OPA-07-015 to redesignate the same lands from “Agriculture” to “Extractive Industrial”, and a Zoning By-law Amendment (ZBA) under file ZAC-07-054, to rezone the subject lands from the Agricultural “A” Zone and Conservation Management “CM” Zone to the Extractive Industrial “EI” Zone.

In response to the ARA license application, the City of Hamilton sent a letter of objection to the MNR outlining the City’s reasons for objecting to the license, which included concerns over hydrogeology, aggregate design and operations, rehabilitation, noise, vibration, blasting, dust, impacts to natural heritage features, the Hayesland Alvar Environmentally Significant Area, and karst features. In addition, the City noted that the license application was premature as the City had not yet had an opportunity to review the Planning Act applications for the subject lands.

In October, 2007, City of Hamilton Planning staff initiated a Combined Aggregate Review Team (CART) to coordinate technical input from agencies and government stakeholders on both the Planning Act and ARA applications. Further information on CART is provided in the Relevant Consultation section below. Peer review consultants were retained by CART and paid for by the proponent to assist in the review of the technical documents submitted in support of the applications. Summaries of the peer review findings are provided in the Analysis/ Rationale for Recommendation section of this Report.

In accordance with the ARA, the City of Hamilton received a Notice of Objector Response from Lafarge Canada Inc., dated August 14, 2009. The response from Lafarge was intended to address the concerns raised in the City’s 2007 objection letter. As per ARA timelines, the City had to respond to this letter within 20 days (by September 9, 2009) and indicate if any outstanding objections remained, and with recommendations that may resolve the objections. If the City did not respond, it would be deemed that there was no longer a valid objection.

The City prepared a response stating that the City’s objection remains outstanding, and submitted it to the MNR and Lafarge Canada Inc. on September 3, 2009. The response acknowledged that Lafarge has been working cooperatively with the City of Hamilton and CART to attempt to address the issues previously identified. At the time the letter was written, the peer reviews related to hydrogeology, noise, blasting, and air quality were not complete, and there were still outstanding issues related to natural heritage. The City also noted that review of the related planning applications was not complete, as review of these applications is dependent on the outcome of the peer reviews.

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Although outstanding objections remain, the MNR has not referred this matter to the Ontario Municipal Board and Environmental Review Tribunal because the proponent has been actively working with the City of Hamilton and CART to address the unresolved issues.

All of the peer reviews have now been completed, and the CART Natural Heritage Sub-committee has completed its review. As a result, CART has completed its final report (attached as Appendix "D"), which was presented to the Planning Committee on August 8, 2011, as part of Report PED11133, and subsequently to Council on August 11, 2011. One of the recommendations contained in Report PED11133 was that Planning staff be directed to report back to Council with a recommendation regarding the proposed amendments to the Flamborough Official Plan (OPA-07-015) and Flamborough Zoning By-law No. 90-145-Z (ZAC-07-054), as well as the Category 2, Class A, Quarry Below Water Licence application for the proposed extension to the existing Lafarge Dundas North Quarry. This report fulfils this requirement.

Severance Applications FL/B-03:68 and FL/B-03:69

Severance Applications FL/B-03:68 and FL/B-03:69 were approved by the Committee of Adjustment on May 28, 2003, and the decision was final on June 24, 2003. The effect of the applications was to sever a portion of the lands located at 692 and 722 5th Concession Road West, and add the severed lands to the lands already owned by Lafarge to the west (see Appendix "G"). The retained portions, fronting onto 5th Concession Road West, would continue to function as agricultural and rural commercial lands. The severed lands, which have now been merged with the Lafarge lands to the west, are the subject of this Zoning By-law and Official Plan Amendment application.

Chronology:

August 15, 2007: Official Plan Amendment Application OPA-07-015 and Zoning By-law Amendment ZAC-07-054 accepted by the City of Hamilton.

August 24, 2007: Preliminary Circulation and Notice of Complete Application of OPA-07-015 and ZAC-07-054 sent to all residents within 120 metres of the subject lands.

August 24, 2007: Application by Lafarge for a Category 2 Class 'A' License under the Aggregate Resources Act (ARA) is deemed complete by the Ministry of Natural Resources (MNR).

October 5, 2007: Lafarge initiates public notification process under the ARA for proposed ARA License Application.

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- October 10, 2007: Revised Notice of Complete Application of OPA-07-015 and ZAC-07-054 mailed to all residents within 120 metres of the subject lands.
- October 17, 2007: Staff Report PED07278 presented to the Economic Development and Planning Committee. Report recommended that the City of Hamilton advise the MNR that it objects to the ARA License Application by Lafarge due to it being premature.
- November 8, 2007: Lafarge holds Public Information Session, as required under the ARA.
- May 5, 2008: First site visit at the Lafarge Dundas North Quarry attended by members of CART.
- September 18, 2008: Site visit at the Lafarge Dundas North Quarry attended by members of the Noise and Blasting Peer Review Team.
- September 19, 2008: Site visit at the Lafarge Dundas North Quarry attended by members of CART and the CART Hydrogeology Peer Review Team.
- August 14, 2009: Lafarge provides Notice of Objector Response to the City of Hamilton, as required under ARA.
- September 3, 2009: City of Hamilton sends response to the Notice of Objector Response to the MNR, stating that the City's objection remains outstanding, but notes that consultation with Lafarge is ongoing.
- September 28, 2009: Information Report PED07278(a) presented to the Economic Development and Planning Committee to provide status update.
- September 7, 2010: Lafarge submits application for Site Plan Amendment to the MNR for the existing Lafarge Dundas North Quarry regarding the Rehabilitation Plan and setbacks.
- August 8, 2011: CART Report is presented to Planning Committee (Council on August 11).

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August 18, 2011: Circulation of Notice of Public Meeting to all residents within 120 metres of the subject lands.

Details of Submitted Applications:

Location: 834 Brock Road (Flamborough)
Owner/Applicant: Lafarge Canada Inc.
Agent: MHBC Planning

Property Description: Area: 30.88 hectares
Width: Approximately 487 metres
Depth: Approximately 860 metres

EXISTING LAND USE AND ZONING:

	<u>Existing Land Use</u>	<u>Existing Zoning</u>
<u>Subject Lands:</u>	Vacant	Agricultural "A" Zone and Conservation Management "CM" Zone
<u>Surrounding Lands:</u>		
North	Agricultural Lands, Greenhouse/Nursery Operation, Workshop, Farm Residences	Agricultural "A" Zone and Agricultural "A" Zone, Modified
South	Existing Lafarge Dundas North Quarry, Agricultural Land	Extractive Industrial "EI" Zone, Agricultural "A" Zone and Conservation Management "CM" Zone
East	Landscaping Business, Agricultural Lands	Agricultural "A" Zone, Agricultural "A" Zone, Modified, and Conservation Management "CM" Zone
West	Existing Lafarge Dundas North Quarry	Extractive Industrial "EI" Zone

POLICY IMPLICATIONS

Provincial Policy Statement (PPS):

The application has been reviewed with respect to the Provincial Policy Statement (PPS).

Section 1.1 - Managing and Directing Land Use to Achieve Efficient Development and Land Use Patterns, states:

“1.1.1 Healthy, liveable, and safe communities are sustained by:

- c) Avoiding development and land use patterns which may cause environmental or public health and safety concerns.”

Further, Section 1.1.4 addresses Rural Areas in Municipalities, and states:

“1.1.4.1 In rural areas located in municipalities:

- a) Permitted uses and activities shall relate to the management or use of resources, resource-based recreational activities, limited residential development, and other rural land uses;
- c) Locally-important agricultural and resource areas should be designated and protected by directing non-related development to areas where it will not constrain these uses;”

Section 1.7 addresses Long-Term Economic Prosperity. Policy 1.7.1.1(b) states that long-term economic prosperity should be supported by planning so that major facilities (including resource extraction activities) and sensitive land uses are appropriately designed, buffered, and /or separated from each other to prevent adverse effects from odour, noise and other contaminants, and minimize risk to public health and safety. Staff notes that the proponent submitted a Noise Study, a Blasting Impact Assessment, and an Air Quality Study in support of the subject application. The findings of these studies will be detailed in the Analysis/Rationale for Recommendation section below.

Section 2.1 addresses Natural Heritage, and states the following:

“2.1.1 Natural features and areas shall be protected for the long term.

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- 2.1.2 The diversity and connectivity of natural features in an area, and the long-term ecological function and biodiversity of natural heritage systems, should be maintained, restored, or where possible, improved, recognizing linkages between and among natural heritage features and areas, surface water features, and ground water features.
- 2.1.6 Development and site alteration shall not be permitted on adjacent lands to the natural heritage features and areas identified in Policies 2.1.3, 2.1.4, and 2.1.5 unless the ecological function of the adjacent lands has been evaluated, and it has been demonstrated that there will be no negative impacts on the natural features or on their ecological functions.”

The natural heritage features identified in Policies 2.1.3, 2.1.4, and 2.1.5 include significant habitat of endangered species, significant wetlands and woodlands, significant wildlife habitat, and fish habitat.

The proponent submitted an Environmental Impact Statement (EIS) - Level 1 and 2 Natural Environment Technical Report, prepared by Golder Associates, and a Level 2 Hydrogeology Technical Report, also prepared by Golder Associates, in support of the subject application. The reports have been reviewed by members of CART and ESAIEG, and the results are discussed in the Analysis/Rationale for Recommendation section below.

Section 2.2 addresses Water. Policy 2.2.1 states:

- “2.2.1 Planning authorities shall protect, improve, or restore the quality and quantity of water by:
- a) Using the watershed as the ecologically meaningful scale for planning;
 - b) Minimizing potential negative impacts, including cross-jurisdictional and cross-watershed impacts;
 - c) Identifying surface water features, ground water features, hydrologic functions and natural heritage features and areas which are necessary for the ecological and hydrological integrity of the watershed;
 - d) Implementing necessary restrictions on development and site alteration to:
 - 1. Protect all municipal drinking water supplies and designated vulnerable areas; and,

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2. Protect, improve or restore vulnerable surface and ground water, sensitive surface water features and sensitive ground water features, and their hydrologic functions;
- e) Maintaining linkages and related functions among surface water features, ground water features, hydrologic functions and natural heritage features and areas;
- f) Promoting efficient and sustainable use of water resources, including practices for water conservation and sustaining water quality; and,
- g) Ensuring stormwater management practices minimize stormwater volumes and contaminant loads, and maintain or increase the extent of vegetative and pervious surfaces.

2.2.2 Development and site alteration shall be restricted in or near sensitive surface water features and sensitive ground water features such that these features and their related hydrologic functions will be protected, improved, or restored. Mitigative measures and/or alternative development approaches may be required in order to protect, improve, or restore sensitive surface water features, sensitive ground water features, and their hydrologic functions.”

As noted above, in support of the subject application, the proponent submitted a Level 2 Hydrogeology Technical Report, prepared by Golder Associates. The Report was peer reviewed by Dillon Consulting, on behalf of CART, and the results are discussed in the Analysis/Rationale for Recommendation section below.

Section 2.5 addresses Mineral Aggregate Resources. Policy 2.5.1 states that mineral aggregate resources shall be protected for long-term use. Further, Section 2.5.2, Protection of Long-Term Resource Supply, states the following:

- “2.5.2.1 As much of the mineral aggregate resource as is realistically possible shall be made available as close to markets as possible. Demonstration of need for mineral aggregate resources, including any type of supply/demand analysis, shall not be required, notwithstanding the availability, designation, or licensing for extraction of mineral aggregate resources locally or elsewhere.
- 2.5.2.2 Extraction shall be undertaken in a manner which minimizes social and environmental impacts.
- 2.5.2.3 The conservation of mineral aggregate resources should be promoted by making provision for the recovery of these resources, wherever feasible.

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2.5.3.1 Progressive and final rehabilitation shall be required to accommodate subsequent land uses, to promote land use compatibility, and to recognize the interim nature of extraction. Final rehabilitation shall take surrounding land use and approved land use designations into consideration.”

Staff notes that a Rehabilitation Plan has been submitted by Lafarge with the ARA Application. The proposed end use is a lake with wetland features. The Rehabilitation Plan has been reviewed by members of CART and the Peer Review Team.

Section 2.6, Cultural Heritage and Archaeology, states in Policy 2.6.2 that development and site alteration shall only be permitted on lands containing archaeological resources or areas of archaeological potential if the significant archaeological resources have been conserved by removal and documentation, or by preservation on site. A Stage 1 and 2 Archaeological Assessment, prepared by Archaeologix Inc., and dated May, 2007, was submitted with the subject application. The Assessment did not result in the identification of any significant archaeological material or sites, and the study authors recommended no further archaeological interest in the subject property. The Archaeological Assessment was submitted to the Ministry of Culture for review, and the Provincial interest in archaeology was signed off by the Ministry on September 9, 2009.

Based on the above, and upon the further information in the Analysis/Rationale for Recommendation section of this Report, the proposal is consistent with the Provincial Policy Statement.

Greenbelt Plan

The subject lands are designated as “Protected Countryside - Rural” and “Natural Heritage System” under the Greenbelt Plan. Policy 3.1.4 addresses Rural Areas and states that Rural Areas support and provide the primary locations for a range of recreational, tourism, institutional, and resource-based commercial/industrial uses.

Section 3.2.2 addresses the Natural Heritage System. The following policies, in particular, are noted:

“3.2.2.3 New development or site alteration in the Natural Heritage System (as permitted by the policies of this Plan) shall demonstrate that:

- a) There will be no negative effects on key natural heritage features or key hydrologic features or their functions;
- b) Connectivity between key natural heritage features and key hydrologic features is maintained, or where possible, enhanced for the movement of native plants and animals across the landscape;

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- c) The removal of other natural features not identified as key natural heritage features and key hydrologic features should be avoided. Such features should be incorporated into the planning and design of the proposed use, wherever possible;

3.2.2.4 Where non-agricultural uses are contemplated within the Natural Heritage System, applicants shall demonstrate that:

- b) Connectivity along the system and between key natural heritage features or key hydrologic features located within 240 metres of each other is maintained or enhanced; and,
- c) Buildings or structures do not occupy more than 25 percent of the total developable area, and are planned to optimize the compatibility of the project with the natural surroundings.”

Section 3.2.3 addresses the Water Resource System Policies. The following policies, in particular, are noted:

“3.2.3.1 All planning authorities shall provide for a comprehensive, integrated, and long-term approach for the protection, improvement, or restoration of the quality and quantity of water. Such an approach will consider all hydrologic features and functions, and include a systems approach to the inter-relationships between and/or among recharge/discharge areas, aquifers, headwaters and surface waters (e.g. lakes, as well as rivers and streams, including intermittent streams).

3.2.3.4 Municipalities shall, in accordance with provincial direction related to the protection of source water, protect vulnerable surface and ground water areas, such as wellhead protection areas, from development that may adversely affect the quality and quantity of ground and surface waters.”

Section 3.2.4 addresses Key Natural Heritage Features and Key Hydrologic Features. This will be addressed in detail in the Analysis/Rationale for Recommendation section of this Report. However, the following policies are noted:

For lands within a key natural heritage feature or a key hydrologic feature in the Protected Countryside, the following policies shall apply:

“3.2.4.1 Development or site alteration is not permitted in key hydrologic features and key natural heritage features within the Natural Heritage System, including any associated vegetation protection zone, with the exception of:

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- c) Infrastructure, aggregate, recreational, shoreline and existing uses, as described by and subject to the general policies of Section 4 of this Plan.
- 3.2.4.2 Beyond the Natural Heritage System within the Protected Countryside (as shown on Schedule 4), key hydrologic features are defined by and subject to the natural features policies of Section 3.2.4.
- 3.2.4.3 Beyond the Natural Heritage System within the Protected Countryside (as shown on Schedule 4), key natural heritage features are not subject to the natural features policies of Section 3.2.4 of this Plan, but are to be defined pursuant to, and subject to, the policies of the PPS.
- 3.2.4.4 In the case of wetlands, seepage areas and springs, fish habitat, permanent and intermittent streams, lakes, and significant woodlands, the minimum vegetation protection zone shall be a minimum of 30 metres wide measured from the outside boundary of the key natural heritage feature or key hydrologic feature.
- 3.2.4.5 A proposal for new development or site alteration within 120 metres of a key natural heritage feature within the Natural Heritage System, or a key hydrologic feature anywhere within the Protected Countryside, requires a natural heritage evaluation and hydrological evaluation, which identify a vegetation protection zone which:
- a) Is of sufficient width to protect the key natural heritage feature or key hydrologic feature and its functions from the impacts of the proposed change and associated activities that may occur before, during, and after, construction, and where possible, restore or enhance the feature and/or its function; and,
 - b) Is established to achieve, and be maintained as natural self-sustaining vegetation.”

The Greenbelt Plan contains extensive policies regarding Non-Renewable Resources in Section 4.3.2, including the following:

- “4.3.2.1 Activities related to the use of non-renewable resources are permitted in the Protected Countryside, subject to all other applicable legislation, regulations, and municipal Official Plan policies and By-laws. The availability of mineral aggregate resources for long-term use will be determined in accordance with the PPS, except as provided below.

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- 4.3.2.2 Non-renewable resources are those non-agriculture based natural resources that have a finite supply, including mineral aggregate resources. Aggregates, in particular, provide significant building materials for our communities and infrastructure, and the availability of aggregates close to market is important both for economic and environmental reasons.
- 4.3.2.3 Notwithstanding the Natural System policies of Section 3.2 of this Plan, within the Natural Heritage System, mineral aggregate operations and wayside pits and quarries are subject to the following:
- a) No new mineral aggregate operation and no wayside pits and quarries, or any ancillary or accessory use thereto will be permitted in the following key natural heritage features and key hydrologic features:
 - i. Significant wetlands;
 - ii. Significant habitat of endangered species and threatened species; and,
 - iii. Significant woodlands unless the woodland is occupied by young plantation or early successional habitat (as defined by the Ministry of Natural Resources).
 - b) An application for a new mineral aggregate operation or new wayside pits and quarries may only be permitted in other key natural heritage features and key hydrologic features not identified in 4.3.2.3 (a) and any vegetation protection zone associated with such other feature where the application demonstrates:
 - i. How the Water Resource System will be protected or enhanced; and,
 - ii. That the specific provisions in 4.3.2.5 (c), (d) and 4.3.2.6 (c) have been addressed, and that they will be met by the operation.
 - c) Any application for a new mineral aggregate operation, or the expansion of an existing mineral aggregate operation, shall be required to demonstrate:
 - i. How the connectivity between key natural heritage features and key hydrologic features will be maintained before, during, and after the extraction of mineral aggregates;

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- ii. How the operator could immediately replace any habitat that would be lost from the site with equivalent habitat on another part of the site or on adjacent lands; and,
 - iii. How the Water Resource System will be protected or enhanced; and,
 - d) An application for the expansion of an existing mineral aggregate operation may be permitted in the Natural Heritage System, including key natural heritage features and key hydrologic features, and in any associated vegetation protection zone only if the related decision is consistent with the PPS.
- 4.3.2.4 The Ministry of Natural Resources will pursue the following under the Aggregate Resources Act, for all mineral aggregate operations, including wayside pits and quarries, within the Protected Countryside:
- a) Rehabilitated area will be maximized and disturbed area minimized on an ongoing basis during the life-cycle of an operation;
 - b) Progressive and final rehabilitation efforts will contribute to the goals of the Greenbelt Plan;
 - c) The Ministry of Natural Resources will determine the maximum allowable disturbed area of each mineral aggregate operation. Any excess disturbed area above the maximum will be required to be rehabilitated. For existing operations, this shall be completed within 10 years of the date of approval of the Greenbelt Plan, and 50% completed within 6 years. For new operations, including expansions, the total disturbed area shall not exceed an established maximum allowable disturbed area; and,
 - d) An application for a mineral aggregate operation or wayside pits and quarries may be permitted only where the applicant demonstrates that the quantity and quality of groundwater and surface water will be maintained, as per Provincial Standards under the Aggregate Resources Act.
- 4.3.2.5 When operators are undertaking rehabilitation of mineral aggregate operation sites in the Protected Countryside, the following provisions apply:
- b) The disturbed area of a site will be rehabilitated to a state of equal or greater ecological value, and for the entire site, long-term ecological integrity will be maintained or restored, and to the extent possible, improved;

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- c) If there are key natural heritage features or key hydrologic features on the site, or if such features existed on the site at the time of application:
 - i. The health, diversity, and size of these key natural heritage features and key hydrologic features will be maintained or restored and, to the extent possible, improved to promote a net gain of ecological health; and,
 - ii. Any permitted extraction of mineral aggregates that occurs in a feature will be completed, and the area will be rehabilitated, as early as possible in the life of the operation.
 - d) Aquatic areas remaining after extraction are to be rehabilitated to aquatic enhancement, which shall be representative of the natural ecosystem in that particular setting or ecodistrict, and the combined terrestrial and aquatic rehabilitation shall meet the intent of 4.3.2.5 (c).
 - e) Outside the Natural Heritage System, and except as provided in 4.3.2.5 (b), (c) and (d), final rehabilitation will appropriately reflect the long-term land use of the general area, taking into account applicable policies of this Plan and, to the extent permitted under this Plan, existing municipal and provincial policies.
- 4.3.2.6 Final rehabilitation in the Natural Heritage System will meet these additional provisions:
- b) Where there is underwater extraction, no less than 35% of the non-aquatic lands of each license is to be rehabilitated to forest cover, which shall be representative of the natural ecosystem in that particular setting or ecodistrict; and,
 - c) Rehabilitation will be implemented so that the connectivity of the key natural heritage features and the key hydrologic features on the site and on adjacent lands will be maintained or restored, and to the extent possible, improved.
- 4.3.2.7 Operators are encouraged to consider and provide for public access to former aggregate sites upon final rehabilitation.
- 4.3.2.10 Municipalities should ensure that all land use activities related to the post extraction rehabilitation of mineral aggregate operations are consistent with any relevant approved source protection plan and relevant watershed or sub-watershed plan.”

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Detailed discussion of the issues related to Natural Heritage, Water Resources, and Rehabilitation are discussed in the Analysis/Rationale for Recommendation section of this Report. As such, the proposal conforms to the Greenbelt Plan.

Hamilton-Wentworth Regional Official Plan:

The subject lands are designated as “**Rural Area**” on Map No. 1 - Regional Development Pattern within the Hamilton-Wentworth Regional Official Plan. The lands are identified as “Stone Aggregates” on Map No. 5 - Mineral Aggregate Areas. In addition, the lands are located within Environmentally Significant Area No. 28 (Hayesland Complex) on Map No. 4 - Environmentally Significant Areas, and located adjacent to a Provincially Significant Wetland as identified on Appendix Map No. 1 - Wetlands and Streams. The relevant policies of the Hamilton-Wentworth Regional Official Plan related to this application are outlined below.

Section C-1.2 addresses Environmentally Significant Areas with the following policies:

“To protect natural features, the Region will:

C-1.2.1 Designate Environmentally Significant Areas, as shown on Map No. 4.

C-1.2.2 Apply the following policies in assessing the merits of proposed changes in land use within and adjacent to Environmentally Significant Areas;

- a) Land use changes in or adjacent to Environmentally Significant Areas will only be permitted where, in addition to meeting other policies in this plan, such development:
 - i) Will not adversely affect, degrade, or destroy any of the qualities which are the basis for the area’s designation;
 - ii) Will not cause any significant impacts upon water quality and quantity; and,
 - iii) Will not adversely affect the implementation of any resource protection policies or plans.
- b) Proposed changes will be referred to the Environmentally Significant Areas Impact Evaluation Group (ESAIEG) for review. ESAIEG will advise Regional Environment staff on whether the proposed changes satisfy the intent of Policy C-1.2.2.

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- c) In assessing the appropriateness of the proposed change, the proponent may be required to submit an Environmental Impact Statement which may include plans/studies, environmental analyses, cumulative impact assessments, buffer requirements, or other associated documentation considered necessary by ESAIEG.
- d) Land use changes will not be permitted within Provincially Significant Wetland Areas, as shown on Appendix Map No. 1, and as updated from time-to-time by the MNR. Development on land adjacent to a provincially significant wetland (land within 120 metres of a wetland area or lands connecting individual wetland areas within a wetland complex), with the exception of existing agricultural activities, will be prohibited unless it can be demonstrated, through an Environmental Impact Statement, prepared in accordance with Provincial guidelines, that it does not result in any of the following:
 - i) Loss of wetland functions;
 - ii) Subsequent demand for future development which will adversely affect existing wetland functions;
 - iii) Conflict with existing site-specific wetland management practices; and,
 - iv) Loss of contiguous wetland area.”

The proponent submitted an Environmental Impact Statement (EIS) - Level 1 and 2 Natural Environment Technical Report, prepared by Golder Associates, in support of the subject application. The EIS has been reviewed by members of CART and ESAIEG, and the results are discussed in the Analysis/Rationale for Recommendation section below.

Section C-2.2 addresses Mineral Aggregates through the following policies:

“The Region will:

- C-2.2.1 Designate Mineral Aggregate Resource areas on Map No.5, to protect these areas for future mineral aggregate extraction. The location of these areas may be refined, without amendment to this Plan, in Area Municipal Official Plans.

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- 2.2.2 Require Area Municipalities to identify Mineral Aggregate Resource areas and legally existing pits and quarries in their Official Plans, and include policies for the protection of these areas from land uses which are incompatible with possible future extraction. Other uses permitted in association with extraction operations are to be detailed in the Area Municipal Official Plans in accordance with Section 2.3 of the Mineral Aggregate Resources Policy Statement.
- 2.2.3 Require Area Municipalities to provide policies in their Official Plans for the establishment of new, and the expansion of existing pits and quarries.
- 2.2.4 Request the rehabilitation of all pits and quarries and the progressive rehabilitation of operating pits and quarries. Progressive rehabilitation refers to simultaneous stripping, extraction, and rehabilitation of pits and quarries.
- 2.2.8 Monitor aggregate resource extraction operations within the Region for the purpose of analyzing effects on the environment, transportation and road facilities, and rehabilitation activities.
- 2.2.9 Require the proposals to establish new or expand existing extractive operations must include provisions to minimize negative impacts on surrounding areas. Where such operations abut Environmentally Significant Areas, the matter may be referred to the ESAIEG.”

The subject lands are designated as a Mineral Aggregate Resource Area within the Regional Official Plan. The proposed rehabilitation plan has been reviewed by members of CART as part of the ARA License application. Further details on the proposed rehabilitation will be provided in the Analysis/Rationale for Recommendation section of this Report.

Section 3.2.3 addresses Rural Economic Activity, and states the following:

- “3.2.3.1 Consider in the Rural Area, as shown on Map No. 1, individual commercial and industrial uses only if they are directly related to and serve the agricultural community or directly utilize the natural resources of the Rural Area.

Such uses will only be permitted in locations where:

- a) Ground and surface water resources are not threatened;
- b) Adequate transportation services are available;

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- c) Municipal water or sewer services are not required;
- d) Agricultural operations will not be disturbed, will comply with the Minimum Distance Separation formula; and,
- e) The aesthetic and functional characteristics of the rural landscape will not be compromised.”

The proposed extension to the Lafarge Dundas North Quarry has been reviewed with respect to impact on ground and surface water resources and transportation impact, as will be discussed in the Analysis/Rationale for Recommendation section below. Municipal services are not required. In addition, as the proposal is for an extension to an existing quarry operation, the functional character of the rural landscape will not be further compromised. Therefore, staff finds that the proposal conforms to the Hamilton-Wentworth Regional Official Plan.

Flamborough Official Plan

The subject lands are designated “Agriculture” on Schedule B - Rural Land Use Plan, and identified as “Mineral Aggregate Resource Lands” on Schedule J - Mineral Aggregate Areas. An Official Plan Amendment application has been submitted to redesignate the subject lands from “Agriculture” to “Extractive Industrial”. Section B.7 - Extractive Industrial states the following:

- “B.7 It is the intent of Council to recognize the local, regional, and provincial significance of MINERAL AGGREGATE RESOURCES within the Town, and to provide for the establishment of extractive operations and their long-term protection from incompatible land uses. In this regard, the establishment or expansion of pits and quarries shall require amendment to this Plan and the Town’s Zoning By-law. Further, Council shall encourage the rehabilitation of pits and quarries to an after-use which conforms to this Official Plan.

- B.7.1 The uses permitted in areas designated EXTRACTIVE INDUSTRIAL on Schedule ‘B’ shall be for the extraction of aggregate resources from a pit or quarry, as defined by the Pits and Quarries Control Act. In conjunction with aggregate extraction, the following associated uses shall also be permitted:
 - (i) Aggregate storing;
 - (ii) Crushing and screening of aggregate;
 - (iii) Concrete and asphalt mix manufacturing.

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- B.7.3 The establishment of new pits and quarries, or the expansion of existing operations beyond their boundaries, as shown on Schedule 'B', shall require an amendment to this Plan and to the Zoning By-law.
- B.7.4 When considering amendments to the Plan for the establishment of new pits and quarries, or the expansion of existing operations, the following matters will be evaluated by Council:
- (i) Compatibility with adjacent existing and planned land uses;
 - (ii) Demonstration of the need for, and benefit of, additional aggregate resource extraction;
 - (iii) Potential impacts on the environment, including measures required to minimize any adverse impacts;
 - (iv) Potential impacts on the transportation system;
 - (v) The capability of the land for agricultural uses and for the rehabilitation to a use which conforms to this Official Plan or back to an agricultural use where Soil Classes 1 to 4 have been defined. Such lands shall be rehabilitated back to substantially the same acreage and average soil capability for agriculture; and,
 - (vi) Other such matters as Council deems necessary."

Policy B.7.4 above outlines the considerations that must be taken in evaluating a proposal for a new or expanded quarry. Staff notes the following with relation to the above:

- (i) Compatibility with adjacent existing and planned uses: the uses surrounding the proposed quarry extension are primarily agricultural, farm residential, and some rural commercial uses. The proposal has been reviewed with respect to the impact on surrounding uses. Noise, blasting and air quality studies were submitted by the proponent and peer reviewed on behalf of CART. The studies indicate that all potential emissions are within the appropriate provincial guidelines. In addition, the Level 2 Hydrogeological Study indicates that there are no significant impacts predicted on local wells.

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- (ii) Demonstration of the need for, and benefit of, additional aggregate resource extraction: the stone which would be extracted from the proposed extension is a high value metallurgical aggregate that is used in the steel and construction industries. Further, the excavation in the existing North Quarry is almost complete, and if this application is approved, the lifespan of the Dundas North Quarry would be extended by approximately 5 years.
- (iii) Potential impacts on the environment, including measures required to minimize any adverse impacts: the proponent submitted an Environmental Impact Statement Level 2 Natural Environment Technical Report and a Level 2 Hydrogeology Technical Report. These Reports were reviewed by CART and the CART Peer Review Team. Details are provided in the Analysis/Rationale for Recommendation section below.
- (iv) Potential impacts on the transportation system: no new entrances or exits are proposed as a result of the extension as the transportation system currently in place for the North Quarry will remain. Materials extracted from the North Quarry, and the proposed extension if approved, are transported via a 3.2 kilometre conveyor belt to the processing plant south of Highway 5. It is not anticipated that there will be any overall increase in production levels at the Dundas North Quarry as a result of the extension and, therefore, the volume of truck traffic generated is not expected to increase.
- (v) The capability of the land for agricultural uses and for the rehabilitation to a use which conforms to this Official Plan or back to an agricultural use where Soil Classes 1 to 4 have been defined: the majority of the site contains Soil Class 6, with only a small portion of Soil Class 4, and therefore, the site is not considered a significant agricultural resource.

“B.7.5 All applications for amendments to the Plan shall include the following:

- (i) The location, dimensions, topography, size, and description of the site proposed for a Mineral Resource Extraction Area;
- (ii) The location, height, dimensions, and use of all buildings or structures existing or proposed to be erected on the site;
- (iii) The location, quality, and estimated quantity of the mineral resources;

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- (iv) The use of all land, and the location and use of all buildings and structures lying within a distance of 150 metres (500 feet) of the boundaries of the site;
- (v) Existing and anticipated final grades of all lands and excavation, and the limits of excavation within the site;
- (vi) Surface water diversion, storage, and drainage provisions;
- (vii) All entrances, exits, and proposed routes to be used by associated transport;
- (viii) Locations of stockpiles for overburden stripping and mineral resources;
- (ix) Proposed tree screening and berming;
- (x) Sequential and final rehabilitation plans;
- (xi) Extent of adjacent property holdings which may be intended for future mineral resource extraction operations, where appropriate;
- (xii) Hydrology, soil, wildlife, or vegetation studies which may be required by Council due to specific site concerns; and,
- (xiii) Other information as Council deems necessary.”

As the subject proposal addresses the items identified in Policy B.7.4 regarding expansion of the quarry, the proposal conforms to the Extractive Industrial policies of the Town of Flamborough Official Plan.

Rural Hamilton Official Plan

The Rural Hamilton Official Plan received Ontario Municipal Board (OMB) approval, in part, on June 28, 2011, however, clarity on the OMB Decision is currently being sought from the Board. The subject Official Plan and Zoning By-law Amendment applications were accepted by the City of Hamilton on August 15, 2007, and therefore, the former Official Plan is applicable to these applications. However, the policies of the Rural Hamilton Official Plan are being reviewed for information purposes. The subject lands are designated as “Rural” on Schedule D - Rural Land Use Designations. In addition, the subject lands are designated as “Core Area” on Schedule B - Natural Heritage System, and “Potential Stone Aggregates” on Appendix C - Non-Renewable Resources.

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Section C.2.0 addresses the Natural Heritage System. The following policies are applicable:

- “C.2.3.2 Core Areas include key natural heritage features, key hydrologic features, and any associated vegetation protection zones and provincially significant and local natural areas that are more specifically identified by Schedules B-1 to B-8 - Detailed Natural Heritage Features. Core Areas are the most important components in terms of biodiversity, productivity, and ecological and hydrological functions. It is the intent of this policy to preserve and enhance Core Areas and to ensure that any development or site alteration within or adjacent to them shall not negatively impact their environmental features or ecological functions.
- C.2.4.1 Permitted uses within Core Areas located within the Greenbelt Natural Heritage System, as identified on Schedule B - Natural Heritage System, or within key hydrologic features anywhere in the Protected Countryside of the Greenbelt Plan, as shown on Schedules B-1 to B-8 - Detailed Natural Heritage Features or identified by an Environmental Impact Statement, including any associated vegetation protection, zone shall include:
- f) Mineral aggregate extraction, in accordance with Section D.6, Mineral Aggregate Resource Extraction Areas, of this Plan;
- C.2.4.2 New development or site alteration shall not be permitted within a key natural heritage feature within the Greenbelt Natural Heritage System or a key hydrologic feature anywhere in the Protected Countryside, including any associated vegetation protection zone. However, new development or site alteration proposed adjacent to (within 120 metres of) a key natural heritage feature within the Greenbelt Natural Heritage System, or a key hydrologic feature anywhere in the Protected Countryside, requires an Environmental Impact Statement which identifies a vegetation protection zone, according to the requirements in Sections C.2.4.10, C.2.4.11, C.2.4.12, C.2.4.13, and C.2.4.14.
- C.2.4.6 Beyond the Greenbelt Natural Heritage System within the Protected Countryside, new development and site alteration shall not be permitted within or adjacent to key natural heritage features in the Greenbelt Protected Countryside unless it has been evaluated through an Environmental Impact Statement and has been demonstrated that there shall be no negative impacts on the natural features or their ecological functions.

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- C.2.4.7 New development and site alteration within the Protected Countryside of the Greenbelt Plan Area that is proposed to take place within or adjacent to any other Core Area identified on Schedule B - Natural Heritage System, through a consent, Plan of Subdivision, Zoning By-law, Site Plan approval, Official Plan Amendment, or Site Alteration By-law permit shall require an Environmental Impact Statement in accordance with Section C.2.4.8 of this Plan.
- C.2.4.8 New development or site alteration subject to Sections C.2.4.1, C.2.4.2, C.2.4.3, C.2.4.5, C.2.4.6, C.2.4.7, and C.2.4.9 requires, prior to approval, the submission and acceptance of an Environmental Impact Statement which demonstrates, to the satisfaction of the City and the relevant Conservation Authority, that:
- a) There shall be no negative impacts on the Core Areas or their ecological functions;
 - b) Connectivity between Core Areas shall be maintained, or where possible, enhanced for the movement of surface and ground water, plants and wildlife across the landscape;
 - c) The removal of other natural features shall be avoided or minimized by the planning and design of the proposed use or site alteration, wherever possible;
- C.2.4.9 Where non-agricultural uses are proposed within the Greenbelt Natural Heritage System, applicants shall demonstrate that:
- b) Connectivity along the system and between key natural heritage or key hydrologic features located within 240 metres of each other shall be maintained or enhanced; and,
 - c) Buildings or structures do not occupy more than 25 percent of the total developable area, and are planned to be compatible with the natural surroundings.
- C.2.12.1 The City shall protect, improve, or restore the quality and quantity of water by using the watershed as the ecologically meaningful scale for planning and minimizing potential negative impacts, including cross-jurisdictional and cross-watershed impacts.

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C.2.12.3 Development and site alteration shall be restricted in or near sensitive surface water features and sensitive ground water features such that these features and their related hydrologic functions will be protected, improved, or restored. Mitigative measures and/or alternative development approaches may be required in order to protect, improve, or restore sensitive surface water features, sensitive ground water features, and their hydrologic functions.”

As previously mentioned, an Environmental Impact Statement and Level 2 Hydrogeological Study were submitted in support of the subject applications. These Studies will be discussed in detail in the Analysis/Rationale for Recommendation section of this Report.

Section D.4.0 addresses the Rural Designation.

“D.4.1 Uses permitted in the Rural designation are limited to the uses permitted in Section D.2.0, Agriculture Designation of this Plan, other resource-based rural uses and institutional uses serving the rural community.”

The uses permitted in the Agriculture Designation are agricultural uses, agricultural-related uses, and on-farm secondary uses.

Section D.6.0 addresses Mineral Aggregate Resource Extraction Areas.

“D.6.1 Mineral Aggregate Resource Areas where there is a high potential for resource extraction are identified as Potential Mineral Aggregate Resource Extraction Areas on Appendix C - Non-Renewable Resources to this Plan.

D.6.13 The establishment of a new mineral aggregate operation or extensions to existing operations requiring license approval under the Aggregate Resources Act will require an amendment to this Plan and the Zoning By-law.

D.6.17 The City will consider an amendment to this Plan to redesignate lands for a new mineral aggregate operation or the expansion to an existing operation when the applicant has completed all site and infrastructure plans required under the Aggregate Resources Act, as well as the following:

- a) All Environmental Impact Studies required by this Plan and by all relevant approval agencies;
- b) A hydrogeological study;
- c) A transportation and haul route study;

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- d) Noise, vibration, dust and air quality studies.
- D.6.19 An application for an Official Plan Amendment and/or Zoning By-law Amendment for a new mineral aggregate operation or the expansion to an existing operation within the Greenbelt Natural Heritage System shall be required to demonstrate:
- a) How the connectivity between key natural heritage features and key hydrologic features within, adjacent or affected by operations on the site will be maintained before, during, and after the extraction or mineral aggregates;
 - b) How the operator could immediately replace any habitat that would be lost from the site with equivalent habitat on another part of the site, or on adjacent lands; and,
 - c) That the proposal is consistent with the Provincial Policy Statement.
- D.6.20 Rehabilitation of all mineral aggregate operations, including wayside pits and quarries, shall be undertaken in accordance with the site plans approved under the Aggregate Resources Act, and be compatible with and have minimal impact upon the surrounding natural and visual environment and existing uses.
- D.6.23 Applications for Official Plan or Zoning By-law Amendments for establishment or enlargement of a mineral aggregate operation within the Protected Countryside shall be accompanied by information which demonstrates that rehabilitation will be carried out as follows:
- a) The disturbed area of a site shall be rehabilitated to a state of equal or greater ecological value, the long-term ecological integrity of the entire site will be maintained or restored, and to the extent possible, improved;
 - b) If there are key natural heritage features or key hydrologic features, or if such features existed on the site at the time of application on the site:
 - i) The health, diversity, and size of these key natural heritage features or key hydrologic features will be maintained or restored and, to the extent possible, improved so as to promote a net gain of ecological health; and,

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- ii) Any permitted extraction of mineral aggregates that occurs in a feature will be completed, and the area will be rehabilitated, as early as possible in the life of the operation; and,
 - c) Aquatic areas remaining after extraction are to be rehabilitated to be representative of the natural ecosystem suitable for the eco-district, so that the combined terrestrial and aquatic rehabilitation in remaining areas shall meet the intent of Section D.6.23b).
- D.6.24 Within the Greenbelt Plan Natural Heritage System, the following provisions also apply to final rehabilitation:
- b) Where there is underwater extraction, no less than 35% of the lands not subject to extraction below the water table of each license is to be rehabilitated to forest cover, which shall be representative of the natural ecosystem in that particular eco-district; and,
 - c) Rehabilitation shall be implemented so that the connectivity of the key natural heritage features and key hydrologic features on the sites and on adjacent lands will be restored or maintained, and to the extent possible, improved.”

As will be discussed in the Analysis/Rationale for Recommendation section of this Report, the technical studies and site plans submitted in support of this application have been reviewed by City staff, CART, and the City’s Peer Review Team. The studies have been accepted by City staff, and technical notes have been included on the proposed ARA Site Plans to ensure implementation. As such, the proposal will conform to the Rural Hamilton Official Plan, once amended to the “Mineral Aggregate Resource Areas” Designation.

RELEVANT CONSULTATION

Following receipt of the subject Official Plan and Zoning By-law Amendment applications in 2007, a Combined Aggregate Review Team (CART) was formed in October, 2007, to provide technical review of the proposed quarry extension. CART membership was comprised of the following City Departments and Agencies:

- City of Hamilton - Development Planning Section, Planning and Economic Development Department;
- City of Hamilton - Community Planning and Design Section, Planning and Economic Development Department;

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- City of Hamilton - Health Protection Branch, Public Health Services Department;
- City of Hamilton - Infrastructure and Source Water Planning Section, Public Works Department;
- Conservation Halton;
- Hamilton Conservation Authority;
- Ministry of Environment; and,
- Ministry of Natural Resources.

These members of CART provided comments on the applications and review of the technical supporting documents. These comments culminated in the joint CART report, which was presented to the Planning Committee on August 8, 2011, and which will be summarized in the Analysis/Rationale for Recommendation section below. The CART Report is attached as Appendix "D".

The following additional comments were received from City Divisions that were not represented on CART:

Traffic Engineering and Operations Section, Public Works Department:

The current quarry operation by Lafarge uses a conveyor belt system instead of quarry trucks to send aggregate material from the extraction land at the north end of their holdings to the processing plant south of Highway 5. In the application package submitted with the Zoning application, it is indicated that the transportation system currently in place will remain unchanged, and that no new entrances or exits are planned as a result of this application. We note that the designated haul route is Highway 5, Highway 6, and Highway 403. These are provincial roads operated and maintained by the Ministry of Transportation.

Public Consultation

In accordance with the Planning Act and Council's Public Participation Policy, Notice of Complete Application and Preliminary Circulation of the application was circulated to 428 property owners within 120 metres of the subject property on August 24, 2007. Two letters were received as a result of the circulation, attached as Appendix "E". The letters identified concerns relating to blasting, dust and noise, impact on wells, and truck traffic. These concerns are addressed in the Analysis/Rationale for Recommendation section of this Report. Notice of the Public Meeting was given in accordance with the requirements of the Planning Act.

ANALYSIS / RATIONALE FOR RECOMMENDATION

(include Performance Measurement/Benchmarking Data, if applicable)

1. The proposal has merit and can be supported for the following reasons:
 - (i) It is consistent with the Provincial Policy Statement, and conforms to the Greenbelt Plan;
 - (ii) It conforms to the Hamilton-Wentworth Official Plan;
 - (iii) The proposed quarry extension has undergone a thorough technical review by the Combined Aggregate Review Team, comprising of City staff, outside agencies, and peer reviewers; and,
 - (iv) The proposed quarry extension includes appropriate provisions to ensure protection of the natural environment and to minimize impacts to surrounding residents.

2. The subject proposal is for an extension of the existing Lafarge Dundas North Quarry. The existing North Quarry is licensed under ARA License No. 5473 for an area of 395.7 hectares. This area includes both the North and South quarries. There is no annual tonnage limit on this license. Currently, excavating only takes place in the North Quarry. The blasted material is crushed in the North Quarry before it is transported via a conveyor belt to the processing area south of Highway 5. Excavation is nearing completion in the existing North Quarry. The material extracted from the Lafarge Dundas Quarry operation is high value metallurgical aggregate which is used in roads, construction, and the steel industry.

For the proposed extension, Lafarge Canada has applied to the Ministry of Natural Resources for a Category 2, Class A, Quarry Below Water Table Licence to excavate aggregate from the 30.88 hectare parcel (76.3 acre) to the east of the existing North Quarry. While the proposed licensed area is 30.88 hectares, the area of extraction is proposed to be limited to 29.11 hectares after required setbacks are incorporated. The application is for the removal of unlimited tonnes per year. If this extension is approved, the life of the existing Dundas Quarry operation would be extended by approximately 5 years. The proposed quarry extension would operate below the water table, meaning that dewatering would be required to allow the quarry floor to remain dry during extraction. The quarry is proposed to operate 24 hours a day, 7 days a week, which is the same as the operating hours of the existing quarry.

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An ARA License includes a series of Site Plans with Technical Notes that form part of the License. The Lafarge ARA Application includes the following four Plans: Existing Features; Operational Plan; Progressive Rehabilitation and Final Rehabilitation Plan; and Cross Sections. The Plans are included within the CART Report, attached as Appendix “D”. These Plans have been reviewed by CART and the peer reviewers as part of the technical review of the applications, and appropriate notes have been added to the Plans, where identified by CART. These notes will form part of the ARA License, if approved.

In addition to the ARA License Application, the subject Official Plan and Zoning By-law Amendment applications are required as the MNR cannot issue a license under the ARA for lands that are not zoned to permit the use.

3. As mentioned above, following the receipt of the subject applications, a Combined Aggregate Review Team (CART) was formed to provide a joint technical review function of the subject applications. Representatives from the City of Hamilton, Conservation Halton, Hamilton Conservation Authority, Ministry of Environment, and Ministry of Natural Resources were included on CART. The following technical reports were submitted in support of the proposed quarry extension:

- Hydrogeology Technical Report, Level 2, prepared by Golder Associates Ltd.
- Environmental Impact Statement (EIS) Level 1 and 2 Natural Environment Technical Report, prepared by Golder Associates Ltd.
- Archaeology Assessment (Stages 1 and 2), prepared by Archaeologix Inc.
- Noise Assessment, prepared by Aercoustics Engineering Ltd.
- Blasting Impact Assessment, prepared by Golder Associates Ltd.
- Air Quality Study, prepared by Pottinger Gaherty Environmental Consultants Ltd.

With the exception of the EIS Level 1 and 2 Natural Environment Technical Report and the Archaeology Assessment, the above noted studies were peer reviewed by the CART Peer Review Team (funded by the proponent). The EIS and the Archaeology Assessment were reviewed by CART members. A review of the above-noted technical reports and peer review and CART comments was provided in detail in the CART Report, attached as Appendix “D”, and is summarized below.

Natural Environment

An *Environmental Impact Statement (EIS) Level 1 and 2 Natural Environment Technical Report*, prepared by Golder Associates and dated July, 2007, was submitted with the subject application. The EIS Report was reviewed by the CART Natural Heritage Sub-Committee comprised of staff from the City of Hamilton, Conservation Halton, and the Hamilton Conservation Authority. A summary of the CART review of the EIS Report is provided in this Section, and a more detailed account can be found in the CART Report, attached as Appendix “D”. The primary issues that were identified by CART after reviewing the EIS were the following: presence of alvar on the site; wetland significance; and woodland significance.

Alvar

Alvar is defined in the Greenbelt Plan as “naturally open areas of thin or no soil over essentially flat limestone, dolostone, or marble rock, supporting a sparse vegetation cover of mostly shrubs and herbs”. It is considered a Key Natural Heritage Feature under the Greenbelt Plan. The site is part of the Hayesland Alvar Environmentally Significant Area (ESA). The Golder Natural Heritage Report concluded that the “site is an isolated anomaly that should not be considered part of the Hayesland Alvar”, since both the species composition and the anthropogenically-influenced nature of the plant community on the subject lands preclude it from classification as an alvar for either its features or functions. The Golder Natural Heritage Report also noted that “the field studies completed for, and documented in this report include updated plant community mapping and field verification, which indicate that the alvar classification and ESA designations should be removed from the site”. In response, the Natural Heritage Sub-committee of CART requested a more thorough assessment of the presence of an alvar community on the subject lands, and recommended a review of past relevant studies in the area. Golder provided a review of past studies in the area, and following some additional consideration by CART, the Natural Heritage Sub-committee concluded that having reviewed all of the information provided regarding the alvar on the North Quarry Extension lands, the Committee was prepared to support Golder’s conclusion that it is a cultural feature and does not represent a true alvar, even though alvar ‘indicator’ species occur there in low numbers.

Wetland

A large Provincially Significant Wetland (PSW), the Hayesland-Christie Wetland Complex (HCWC), also known as the Hayesland Swamp, is located to the east of the subject lands. On the Lafarge extension site, there is one small unevaluated wetland. CART had a concern that this small wetland may be connected to the Hayesland Swamp (PSW) to the east and, therefore, requested that Golder evaluate the wetland according to the MNR's Southern Ontario Wetland Evaluation System (OWES). However, Golder responded that, based on observations, it was their opinion that this small wetland pocket does not contribute any particular ecological benefit to the Hayesland Swamp PSW and should not be included in that wetland complex. For this reason, the small wetland in the southeast corner of the site was not evaluated under the OWES. CART was satisfied with Golder's response on this issue. However, under the Greenbelt Plan, this small wetland is a Key Hydrologic Feature and, if removal is proposed, Lafarge must demonstrate "how (they) could immediately replace any habitat that will be lost from the site with equivalent habitat on another part of the site or on adjacent lands". To address this, Lafarge has committed to establishing replacement wetlands along extended portions of the shoreline of the lake, which is proposed as part of the rehabilitation of the quarry site, including a larger lagoon wetland that will be created after the extraction of the Dundas North Quarry. The details on the location and methods of the wetland creation have been added to the site plans.

Woodlands

A woodland is considered significant if at least two or more criteria (i.e., size, interior forest, maturity, rare species, proximity to water, and proximity to other natural areas) are fulfilled. While Significant Woodlands had been identified within the study area, based on the EIS and CART site visits, it was concluded that the small woodland areas on the site did not represent Significant Woodlands. The report concluded that the forested and/or woodland patches recorded on-site do not function collectively as a single woodland, and are not large enough as individual patches to be considered significant. CART initially questioned Golder's conclusions and requested further analysis on the connectivity of the woodland patches and additional justification for not designating them as 'significant'. CART is satisfied with the additional information submitted, and concurs with Golder's findings.

ESAIEG

Because the subject lands contain a portion of the Hayesland ESA, the subject application and the supporting Natural Heritage and Hydrogeology technical reports have been reviewed by the Environmentally Significant Areas Impact Evaluation Group (ESAIEG). ESAIEG is satisfied with the findings of the studies in accordance with the recommendations made by CART and the Peer Review Team.

Hydrogeology/Water Resources

In support of the subject applications, Lafarge submitted a Hydrogeological Level 2 Report, prepared by Golder Associates, dated July 2007, and titled "*Proposed North Quarry Extension Level 2 Hydrogeology Technical Report Lafarge Canada Inc.*" CART retained Dillon Consulting Limited to complete a peer review of hydrogeological and hydrological components, and related aspects of aggregate design and operations of the Proposed North Quarry Extension. Dillon completed a thorough review of the Hydrogeological Report, and following additional consultation and additional pump testing by Golder Associates, Dillon was satisfied with the findings of the Hydrogeological Report, subject to the monitoring and mitigation measures noted below, and the inclusion of appropriate notes on the Site Plans. A summary related to the Hydrogeological Report is noted below, and a more detailed account is found in the CART Report, attached as Appendix "D".

Surface Water

The proposed quarry extension lies within the catchment area to the West Grindstone Creek (which has a drainage area of approximately 26 km²). Other surface water features adjacent to the study area include the Hayesland-Christie Wetland Complex (HCWC), located to the east; and Spencer Creek, located southwest of the existing North Quarry.

Groundwater

With regard to hydrogeological characterization, the two main formations in the subject area are the Guelph Formation and the Eramosa Formation (the upper unit of the Lockport Formation). Regionally, the bedrock consists of a 30 to 60 metres thick sequence consisting of the Guelph and Lockport Formations.

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A pumping test was completed in 2006 to provide additional hydrogeological characterization in the extension area and provide data to evaluate potential impacts resulting from the quarry extension. The pumping test was conducted for four days, from November 6 to 10, 2006. Another pumping test was completed from April 6 to 8, 2010. A new pumping well was drilled for this test and was located in the eastern edge of the proposed extension. In addition, new observation wells were drilled in the area between the proposed quarry extension and the HCWC.

Based on the 2006 pumping test, plus monitoring data from the existing quarry, it was concluded that the lateral extent of the zone of influence of the quarry extension would be generally within 500 metres. Additionally, the zone of influence would only extend to the edge of the HCWC. Based on the results of a detailed water budget, it was estimated that quarry dewatering would result in a reduction of water entering the HCWC of 158,195 m³/year, representing 1.5% of the pre-development flows.

Six residential wells were identified to be within 500 metres of the proposed quarry extension. It was recommended that these wells be included in the North Quarry complaints response program. Overall, it was concluded that significant effects on private water wells were not predicted and that, if impacts are detected, there are several means of mitigation in the complaints response program, which has been in place since 1996, and was approved by the Ministry of the Environment (MOE). The program includes the following components:

- Once a complaint is received, a representative of Lafarge visits the site to make an assessment. This includes an examination of the well to determine the water level and pump depth setting.
- If the water supply has been interrupted, a temporary supply is immediately arranged.
- In the event that the problem can be corrected by lowering the pump, this will be done immediately.
- If there is the potential to deepen the existing well, that option could be followed.
- Where sufficient water is not encountered, relocating the well on the property would be considered.

All complaints are then documented in the annual Permit to Take Water reports that are submitted to the MOE.

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The quarry extension is located at a considerable distance from the Greenville municipal well system capture area, and there will not be any interference resulting from the quarry extension on the Greenville municipal well system.

In the detailed analysis of the report completed by the peer reviewer, Dillon Consulting, there was agreement that impacts caused from the proposed extension on private water wells would not significantly increase over that predicted with the full excavation of the currently approved North Quarry, and that monitoring and mitigation measures currently in place at the North Quarry are adequate.

Monitoring and Mitigation

As part of the approval, and to be included in Notes on the Operational Site Plan and Rehabilitation Plan, Lafarge has agreed to the following monitoring measures:

- The proponent proposes to direct part of the water collected in the quarry dewatering process back to the HCWC to compensate for the reduction of the pre-development flows to the HCWC. It is proposed that discharge to the HCWC take place between October and May so that the intermittent nature of the surface water within the HCWC at this location be maintained. As per the notes on the Operational Site Plan, Lafarge has agreed to pump a minimum of 8,625 m³ per month during extraction of the first phase, and a minimum of 65,860 m³ per month during extraction of the second phase.
- Conservation Halton has requested that Lafarge install dual monitoring locations within the wetland in the vicinity of an existing well and the proposed discharge location to ensure that the water levels at the existing well correlate to water levels in the vicinity of the proposed point of flow contribution. Lafarge has agreed to this requirement.
- The monitoring results are to be provided to the Ministry of Natural Resources and the Ministry of the Environment in an Annual Report, along with the discharge records. The Annual Report will summarize the results of the monitoring program and will identify changes from the established baseline conditions. The Annual Report is to include a definitive conclusion regarding the adequacy of the mitigation program.
- In addition to the water level monitoring, there is also an ecological monitoring program for the HCWC, which consists of transect monitoring at two locations in the HCWC directly east of the site in close proximity to the surface and groundwater monitoring stations.

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- Monitoring and mitigation are to continue during the rehabilitation phase after the quarry extension is fully developed and water levels are allowed to increase within the quarry.

Noise

An Assessment of the Potential Noise from Aggregate Extraction and Processing at the Proposed North Quarry Extension (May 2007) was submitted by Aercoustics Engineering Limited, on behalf of Lafarge, with the ARA License application. As part of the Noise Study, worst case scenarios for operation were established for each of the five closest residential receptors with different types of equipment in operation and at different times of the day and night. For each scenario, noise levels were predicted. The predictions assumed incorporation of recommended noise control measures. The Study finds that for all receptors, the predicted worst case scenario noise levels are within the MOE sound level limits, assuming that noise control measures are in place.

The Study provides a detailed overview of the required noise control measures. With regard to construction and rehabilitation, the Study notes that construction noise is not limited by the MOE, as it is considered to be temporary and unavoidable. However, the Study recommends that property line berms should be constructed, as soon as possible, during site preparation so as to provide some shielding to the surrounding residences.

With regard to noise control measures related to extraction and processing, the Study provides general recommendations, and also recommendations specific to two possible drilling scenarios. The noise control measures include the following: sound level limits for equipment operating in the North Quarry Extension; restrictions on drilling and processing operations using portable equipment; direction of extraction is indicated (south to north); berming is required along the north and a portion of the east quarry limit (different heights depending on which drilling scenario is used); prohibition of the use of certain equipment at different times and locations for each scenario; and shielding of the portable processing plant by a continuous barrier of stockpiles or equivalent. The noise control measures are included on the ARA Site Plan to ensure compliance.

The Aercoustics Study was peer reviewed by Jade Acoustics, on behalf of CART. Following the submission of some additional information and clarification by the noise consultant, the peer reviewer agreed with the recommended noise mitigation measures of the Noise Study. It is noted that Lafarge has an existing complaint protocol in effect for the North Quarry, where an investigation is conducted for any complaints received. This existing complaints protocol will be

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an effective means of identifying and responding to any noise issues that may arise in the future.

All details regarding the required noise mitigation, including acoustic berm detail, drilling scenarios, restriction on hours of operation for certain equipment and sound level limits have been included on the Operational Site Plan.

Blasting

The report entitled "*Proposed North Quarry Extension Blasting Impact Assessment*" by Golder, dated May, 2007, was submitted with Lafarge's ARA License application. Proposed blasting operations in the North Quarry Extension will be similar to those already in place at the existing North Quarry. Blasting will take place in two benches varying in height from 15 to 22 metres.

Ground and air vibration effects, produced at private structures as a result of blasting, are subject to guidelines contained in MOE publication NPC 119. For the Blasting Impact Assessment, Golder monitored ground and air vibration levels during several typical blasts in the North Quarry, and also monitored results at the permanent monitoring stations around the quarry property. Based on the monitoring data, Golder concludes that provincial guidelines will be complied with for all blasting beyond a distance of 225 metres from adjacent residential properties. This represents a majority of the proposed extension. When blasting is closer than 225 metres to a sensitive receptor, it will become necessary to reduce the maximum explosive weight detonated per blast, depending on the bench height.

The blasting assessment further concludes that there will be no noticeable effect on adjacent structures or nearby wells, as a result of blasting in the North Quarry, as long as blasting continues to occur within the NPC 119 limits for ground and air vibration effects. In addition, with regards to the Sun-Canadian Pipeline located to the north of the proposed quarry extension, Golder concludes that routine blasting procedures currently used in the North Quarry can be utilized until blasting approaches to within 100 metres of the pipeline, at which time blasting practices may change to ensure compliance with Sun-Canadian Guidelines.

The Blasting Impact Assessment was peer reviewed by Explotech. The peer reviewer was in general agreement with the recommendations of the blasting report, subject to the submission of some additional information and clarification. Appropriate notes have been included on the Operational Site Plan in accordance with the recommendations of the Blasting Assessment.

Air Quality

Lafarge submitted an *Air Quality Study, Dundas North Quarry Expansion, Dundas, Ontario*, prepared by Pottinger Gaherty Environmental Consultants, and dated November, 2008, in support of the subject applications. The Study provides an air quality impact assessment, which predicts off-site maximum ground level concentrations of significant air contaminants in the vicinity of the proposed North Quarry extension. The Study defines significant air contaminants to be particulate matter and combustion gases. The Air Quality Study finds that there will be no significant off-site exceedances of any of the measured contaminants, as a result of operations in the North Quarry Extension, for any of the measured scenarios as compared to applicable standards. Some marginal exceedances were predicted for certain contaminants. However, due to the conservative nature of the Study, including conservative background concentrations, and the fact that the exceedances occurred in areas at the property line, which are agricultural and have limited access, no health or visibility impacts are predicted from any of the minor exceedances. These conclusions are contingent upon implementation of a Best Management Practices (BMP) Plan in the North Quarry Extension.

The BMP Plan indicates measures that must be taken to reduce fugitive dust emissions resulting from on-site traffic movements, unpaved roads, stockpiles, material transfer, and portable crushing and screening. The BMP Plan also includes implementation and monitoring procedures for the Plan, and includes requirements for staff training, record keeping, and posting of the Plan on site. A note regarding the BMP Plan has been included on the Operational Site Plan to ensure compliance.

The Air Quality Study was peer reviewed by Church & Trought Inc. The peer review was in agreement with the findings of the Air Quality Study. Staff from the City of Hamilton Public Health Services Department has also reviewed the Air Quality Study and peer review. Public Health supports all recommendations within the BMP Plan. In addition, Public Health has recommended that periodic air sampling of emissions from the North Quarry should occur to ensure that contaminants do not exceed standards at neighbouring residences. This requirement has been included as a note on the Operational Site Plan.

4. After excavation of the North Quarry is complete, and dewatering has ceased, the North Quarry is proposed to be rehabilitated to a lake with shoreline, wetlands and vegetated side slopes. The quarry will be backfilled with a minimum 2:1 side slopes to create shoreline wetlands and aquatic habitat. Within the shoreline areas organic material, topsoil substrates and cover material will be placed to enhance aquatic habitat. The design will provide amphibian

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breeding, potential fish spawning areas and cover for fish and other aquatic organisms. In addition, a minimum of 35% of the shoreline area above the final water elevation will be forested with native early successional tree species including white pine, trembling aspen, and eastern white cedar. This landform is well-suited for conservation, tourism, recreation and educational purposes, and is compatible with the objectives and vision for the rural area. The Rehabilitation Plan (part of the ARA License) has been reviewed by members of CART, and appropriate revisions and notes have been placed on the Rehabilitation Plan, to the satisfaction of CART members.

5. The proposed Zoning By-law Amendment would rezone the subject lands to the Extractive Industrial “EI” Zone under the Town of Flamborough Zoning By-law. The “EI” Zone requires that no excavation shall be located less than 30 metres from any lot line which abuts any lot containing a residential use or zoned for residential purposes, or 15 metres from all other lots. Lafarge is proposing the limit of extraction to be setback a minimum of 15 metres from the lot lines of the quarry extension, as shown on the Operational Site Plan included within the CART Report, attached as Appendix “D”. The abutting lots to the north of the extension are zoned “Agricultural” and contain existing residential dwellings. However, staff is supportive of this reduction in the setback to the lot line for the limit of extraction, as the closest dwelling to the lot line (located at 722 Concession 5 West) is located at a distance of approximately 200 metres from the lot line. Further, staff notes that this dwelling is already located within 200 metres of the lot line of the existing Lafarge Dundas North Quarry (License 5473), which also includes a limit of extraction setback of 15 metres from the adjoining lot line. Therefore, the proposed extension, and limit of extraction, will not be encroaching further toward this dwelling than what has already been approved through the existing license. The proposed Zoning By-law Amendment, attached as Appendix “C”, exempts the subject lands from the regulations of the “EI” Zone, on the basis that the subject lands will be developing in accordance with the Site Plan approved by the MNR in accordance with the regulations of the ARA.
6. The subject applications were pre-circulated to all residents within 120 metres of the subject lands. Two letters were received, with the following comments:

Blasting

One resident raised a concern over the potential impact of blasting on their house, and the potential for cracks in their walls. As noted above, Lafarge submitted a Blasting Impact Assessment in support of the application, which was peer reviewed on behalf of CART. The blasting report concluded that there would be no noticeable impact on adjacent structures as a result of the blasting

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as the measurements would be within applicable provincial guidelines. This conclusion was based on monitoring of several blasts at the existing North Quarry, as the proposed blasting operations in the North Quarry Extension will be similar to those already in place at the existing North Quarry. The CART peer reviewer concurred with the findings of the Blasting Assessment. Monitoring of the blasts for compliance with the provincial guidelines is required under the ARA License.

Dust and Noise

Concern was raised over potential impacts from dust and noise from the quarry operation. One resident noted concerns that they have previously experienced with noise from the existing North Quarry. These concerns appear to be related to specific pieces of machinery that were in operation in the quarry at that time.

As part of this application, Lafarge submitted a Noise Impact Assessment, prepared by Aercoustics Engineering, which was peer reviewed by the CART peer reviewer. The Noise Assessment concluded that, with appropriate mitigation, MOE noise guidelines would be met at the closest residential receptors to the quarry site. The peer reviewer concurred with these findings. Extensive notes and details have been included on the ARA Site Plans related to the required noise mitigation, including noise berm detail, limitations on timing of operations and extraction, and direction of extraction. In addition, Lafarge has an effective complaint program in place to address any concerns that may arise from surrounding residents.

Further, Lafarge submitted an Air Quality Study, prepared by Pottinger Gaherty Environmental Consultants, which was also peer reviewed by the CART peer reviewer. The Air Quality Study found that emissions of air contaminants would be within applicable standards at all sensitive receptors, contingent upon the implementation of a Best Management Practices (BMP) Plan for dust control. The requirement for implementation of the BMP Plan has been included as a note on the ARA Site Plan.

Impact on Wells

Concerns were raised regarding potential impact on local wells as a result of the quarry extension. This issue was addressed in the Level 2 Hydrogeological Report, prepared by Golder Associates, and peer reviewed by Dillon Consulting. The findings of the Study indicated that significant effects on private water wells were not predicted and that, if impacts are detected, there are several means of mitigation in the complaints response program, which has been in place since

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1996, and was approved by the Ministry of the Environment (MOE). The peer reviewer concurred with this recommendation.

Traffic

One resident identified a concern over truck traffic, and the volume of truck traffic generated by Lafarge onto Highway 5. Staff notes that there are no new entrances or exits proposed as a result of the extension, as the transportation system currently in place for the North Quarry will remain. Materials extracted from the North Quarry, and the proposed extension if approved, are transported via a 3.2 kilometre conveyor belt to the processing plant south of Highway 5. Further, staff notes that it is not anticipated that there will be any overall increase in production levels at the Dundas North Quarry as a result of the extension and, therefore, the volume of truck traffic generated is not expected to increase.

ALTERNATIVES FOR CONSIDERATION:

(include Financial, Staffing, Legal and Policy Implications and pros and cons for each alternative)

If the application is denied, the lands could be developed for the range of uses permitted by the Agricultural "A" Zone and the Conservation Management "CM" Zone. The proposed license under the Aggregate Resources Act could not be issued as the zoning would not permit the extractive use.

CORPORATE STRATEGIC PLAN (Linkage to Desired End Results)

Focus Areas: 1. Skilled, Innovative and Respectful Organization, 2. Financial Sustainability, 3. Intergovernmental Relationships, 4. Growing Our Economy, 5. Social Development, 6. Environmental Stewardship, 7. Healthy Community

Financial Sustainability

- ◆ Effective and sustainable Growth Management.

Intergovernmental Relationships

- ◆ Maintain effective relationships with other public agencies.

Growing Our Economy

- ◆ Newly created or revitalized employment sites.

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Environmental Stewardship

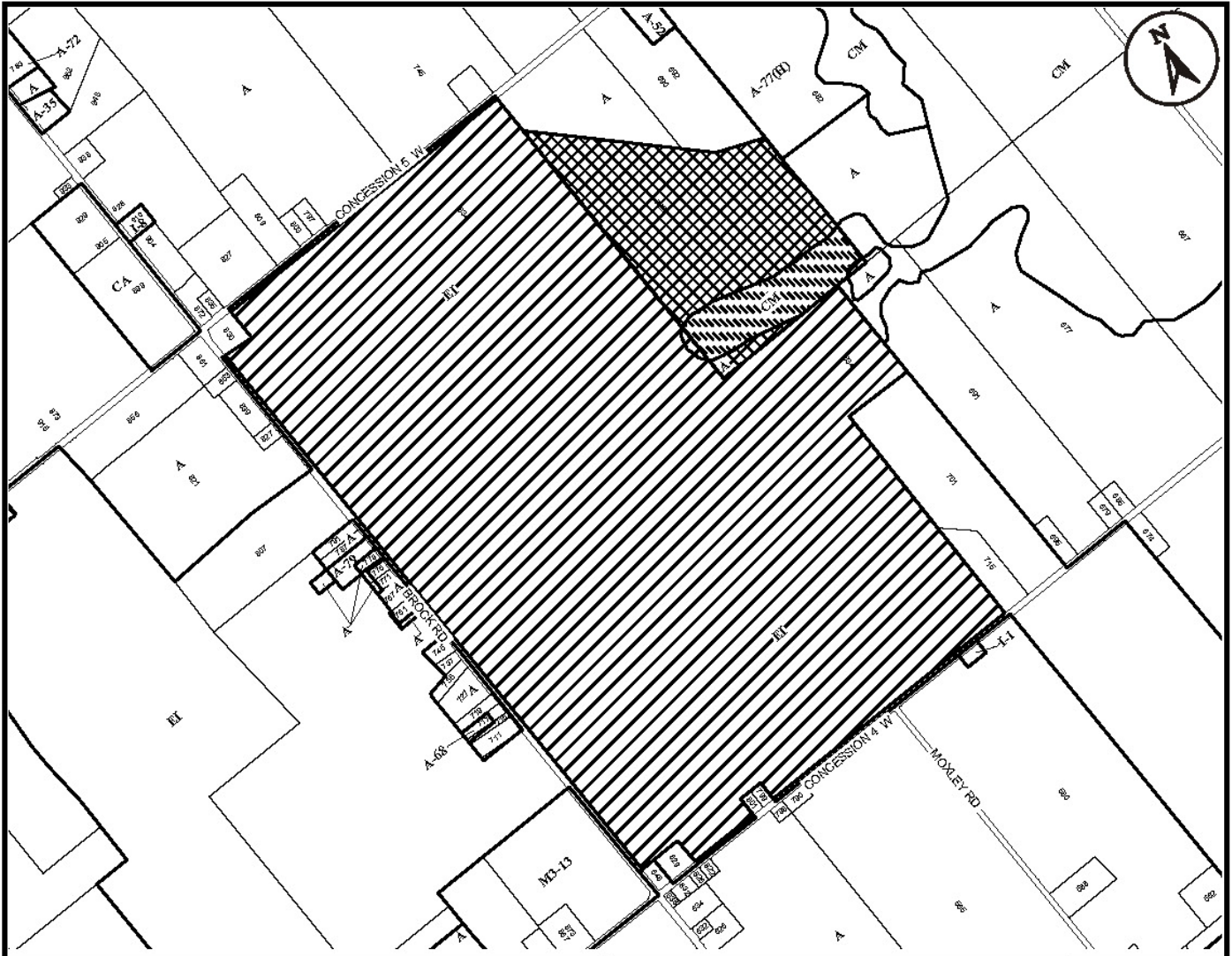
- ◆ Natural resources are protected and enhanced.

APPENDICES / SCHEDULES

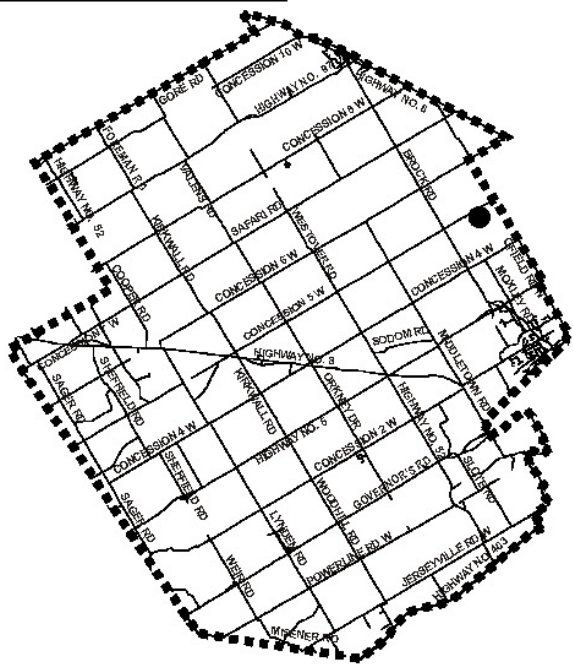
- Appendix "A": Location Plan
- Appendix "B": Draft Official Plan Amendment (Flamborough)
- Appendix "C": Draft Zoning By-law Amendment (By-law 90-145-Z)
- Appendix "D": CART Report
- Appendix "E": Public Comments
- Appendix "F": Draft Rural Hamilton Official Plan Amendment
- Appendix "G": Map of Severance Application FL/B-03:68

:HT

Attachs. (7)



● Site of the Application



Ward 14 Key Map

N.T.S. 

Location Map



PLANNING AND ECONOMIC DEVELOPMENT DEPARTMENT

File Name/Number:
OPA-07-15/ZAC-07-054

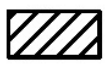


Date:
July 25, 2011

Appendix "A"

Scale:
N.T.S.

Planner/Technician:
HT/NB

Subject Property

-  834 Brock Road
-  Block 1 - Change in Zoning from the Agricultural "A" Zone to the Extractive Industrial "EI-1" Zone
-  Block 2 - Change in Zoning from the Conservation Management "CM" Zone to the Extractive Industrial "EI-1" Zone

DRAFT Amendment No. [REDACTED]

to the

Official Plan of the Former Town of Flamborough

The following text, together with Appendix "A" - Rural Land Use Plan attached hereto, constitutes Official Plan Amendment No. [REDACTED] to the Official Plan of the former Town of Flamborough.

Purpose:

The purpose of this Amendment is to redesignate lands from "Agriculture" to "Extractive Industrial" to permit the extension of the Lafarge Canada Inc., Dundas North Quarry, on a portion of lands known as 834 Brock Road, Part of Lots 9 and 10, Concession 4, in the former Town of Flamborough.

Location:

The lands affected by this Amendment, being approximately 30.88 ha, are part of Lots 9 and 10, Concession 4, in the former Town of Flamborough, known municipally as a portion of 834 Brock Road.

Basis:

The basis for permitting the proposal is as follows:

- The proposed amendment is consistent with the Provincial Policy Statement and conforms to the Greenbelt Plan.
- The proposed amendment conforms to the former Region of Hamilton-Wentworth Official Plan.
- The proposed amendment has undergone a thorough technical review by the Combined Aggregate Review Team, comprising of City staff, outside agencies, and peer reviewers.

Actual Changes:

Schedule Changes:

1. Schedule B, Rural Land Use Plan, be amended by redesignating the subject lands from "Agriculture" to "Extractive Industrial", as shown on Appendix "A" to this amendment.

Implementation:

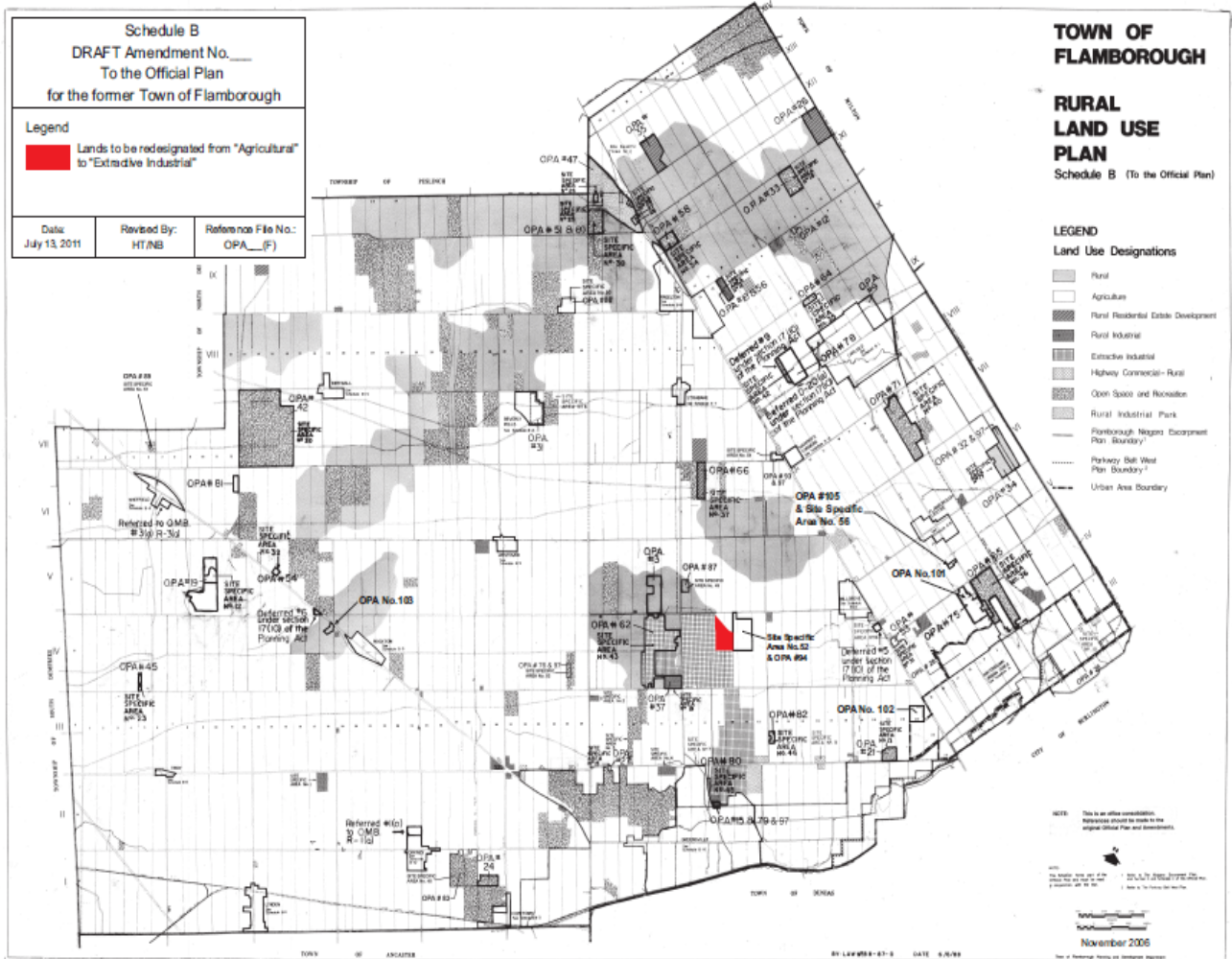
A Zoning By-law Amendment will give effect to this Amendment. The approval of the proposed quarry will be implemented through a License under the Aggregate Resources Act.

This is Schedule "1" to By-law No. [REDACTED], passed on the [REDACTED] day of [REDACTED], 2011.

The City of Hamilton

R. Bratina
Mayor

Rose Caterini
Clerk



Authority: Item [REDACTED]
Planning Committee
Report: 11-[REDACTED] (PED07278(b))
CM: [REDACTED]

Bill No. [REDACTED]

CITY OF HAMILTON

BY-LAW NO. [REDACTED]

To Amend Zoning By-law No. 90-145-Z Respecting Lands Located on Part of Lots 9 and 10, Concession 4, Geographic Township of Flamborough (834 Brock Road), in the former Town of Flamborough, now in the City of Hamilton

WHEREAS the City of Hamilton Act, 1999, Statutes of Ontario, 1999 Chap. 14, Sch. C. did incorporate, as of January 1, 2001, the municipality "City of Hamilton";

AND WHEREAS the City of Hamilton is the successor to certain area municipalities, including the former area municipality known as the "The Corporation of the Town of Flamborough" and is the successor to the former Regional Municipality, namely, "The Regional Municipality of Hamilton-Wentworth";

AND WHEREAS the City of Hamilton Act, 1999 provides that the Zoning By-laws and Official Plans of the former area municipalities and the Official Plan of the former regional municipality continue in force in the City of Hamilton until subsequently amended or repealed by the Council of the City of Hamilton;

AND WHEREAS Zoning By-law No. 90-145-Z (Flamborough) was enacted on the 5th day of November 1990, and approved by the Ontario Municipal Board on the 21st day of December, 1992;

AND WHEREAS the Council of the City of Hamilton, in adopting Item [REDACTED] of Report 11-[REDACTED] of the Planning Committee, at its meeting held on the [REDACTED] day of [REDACTED], 2011, recommended that Zoning By-law No. 90-145-Z be amended as hereinafter provided;

AND WHEREAS this By-law will be in conformity with the Official Plan of the City of Hamilton (the Official Plan of the former Town of Flamborough) upon approval of Official Plan Amendment No. [REDACTED], proposed by the City of Hamilton, but not yet approved in accordance with the provisions of the Planning Act.

NOW THEREFORE the Council of the City of Hamilton enacts as follows:

1. That Schedule A-10 of Zoning By-law No. 90-145-Z (Flamborough), as amended, is hereby further amended by changing the zoning from the Agricultural "A" Zone and the Conservation Management "CM" Zone to the Extractive Industrial "EI" Zone, Modified, on the lands the extent and boundaries of which are more particularly shown on Schedule "A" annexed hereto and forming part of this by-law.
2. That Section 32: Extractive Industrial Zone of Zoning By-law No. 90-145-Z (Flamborough), as amended, is hereby further amended by adding the following Sub-section:
 - 32.3 Exception Numbers
 - 32.3.1 "EI-1" (See Schedule A-10)
 - Permitted Uses:
 - (a) Sub-section 32.1 shall apply.
 - Zone Provisions:
 - (a) Sub-section 32.2 shall not be applicable to the subject lands.
3. That the Clerk is hereby authorized and directed to proceed with the giving of notice of the passing of this by-law, in accordance with the Planning Act.

PASSED and ENACTED this [] day of [], 2011.

R. Bratina
Mayor

Rose Caterini
Clerk

ZAC-07-054



This is Schedule "A" to By-Law No. 11-

Passed the day of, 2011

Clerk

Mayor

Schedule "A"

Map Forming Part of
By-Law No. 11-_____

to Amend By-law No. 90-145-Z

Subject Property



834 Brock Road



Block 1 - Change in Zoning from the Agricultural "A" Zone to the Extractive Industrial "EI-1" Zone



Block 2 - Change in Zoning from the Conservation Management "CM" Zone to the Extractive Industrial "EI-1" Zone

Scale:
N.T.S.

File Name/Number:
ZAC-07-054/OPA-07-015

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HT/NB



Hamilton

PLANNING AND ECONOMIC DEVELOPMENT DEPARTMENT

CART Report

Lafarge Dundas North Quarry Proposal

Part of Lot 9 & 10, Concession IV
Geographic Township of West Flamborough
City of Hamilton
May 2011

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1.0 EXECUTIVE SUMMARY

Lafarge Canada Inc. (Lafarge) has an existing quarry operation, the Dundas Quarry, located in rural Flamborough within the City of Hamilton. The quarry has been in operation since the early 1900's and was acquired by Lafarge in 1998. The Dundas Quarry provides aggregate products to the construction, steel, glass manufacturing, automotive and agricultural industries. The proponent is seeking to allow an expansion to the existing quarry by extending operations northerly (See Appendix "A").

In order to adequately evaluate the submitted applications, a Combined Agency Review Team (CART) was created with members of various public agencies. The members of the CART provided the expertise required to review Lafarge's proposal. Two sub-committees of CART were created to deal with the Natural Heritage and Hydrological/Hydrogeological elements.

This report has been jointly authored by all CART members and intended to summarize the evaluation of the proposal as completed through the CART process. The CART team consisted of:

- City of Hamilton;
- Conservation Halton;
- Hamilton Conservation Authority;
- Ministry of the Environment; and,
- Ministry of Natural Resources

2.0 OVERVIEW OF APPLICATION

2.1 Location

The existing Lafarge Dundas Quarry operation is located north and south of Highway 5, in the former Town of Flamborough now the City of Hamilton, as shown on Appendix "A". The area south of Highway 5 is a processing area. No excavating takes place within this portion of the operation.

Excavation takes place north of Highway 5, in two areas referred to as the North and South Quarries. The South Quarry is located between Highway 5 and Concession 4 West, east of Moxley Road and west of Ofield Road North. The North Quarry is located north of Concession 4 West, and east of Brock Road. The current application is for an extension to the North Quarry as outlined in Appendix "A".

2.2 Current Site Operations

Lafarge currently holds two licenses under the Aggregate Resources Act (ARA) for extraction. License No. 5473 is for an area of 395.7 hectares. This area

includes both the North and South quarries. There is no annual tonnage limit on this license. Currently, excavating only takes place in the North Quarry. The blasted material is crushed in the North Quarry before it is transported via a conveyor belt to the processing area south of Highway 5. License No. 5667 is for 19.6 hectares, known as Part of Lot 9, Concession 4. Although Lafarge has an ARA License for these lands, they do not own the property and do not have a lease agreement with the landowner to extract the material.

2.3 Current Applications

The City of Hamilton received applications in August 2007 for an Official Plan Amendment and Zoning By-law Amendment to permit the lands located at 692 and 722 Concession 5 West, Flamborough, to be used for extractive industrial purposes. These lands are legally described as Part of Lot 9 & 10, Concession 4, City of Hamilton, and comprise 30.88 hectares. The lands are located to the east and north of the existing North Quarry, as shown on Appendix “B”, and would function as an extension to the North Quarry.

The purpose of the Official Plan Amendment (City of Hamilton File No. OPA-07-015) is to redesignate the subject lands from “Agriculture” to “Extractive Industrial” in the Town of Flamborough Official Plan. The purpose of the Zoning By-law Amendment (City of Hamilton File No. ZAC-07-054) is to rezone the lands from the “A” (Agricultural) Zone and “CM” (Conservation Management) Zone to “EI” (Extractive Industrial) Zone in the Town of Flamborough Zoning By-law No. 90-145-Z.

The applicant has also applied to the Ministry of Natural Resources for a Category 2, Class A, Quarry Below Water Table Licence to excavate aggregate from the 30.88 hectare (76.3 acre) site under the ARA. While the proposed licensed area is 30.88 hectares, the area of extraction is proposed to be limited to 29.11 hectares after required setbacks are incorporated. The application is for removal of unlimited tonnes per year. If this extension is approved, the life of the existing Dundas Quarry operation would be extended by approximately 5 years. The proposed quarry extension would operate below the water table, meaning that dewatering would be required to allow the quarry floor to remain dry during extraction. The quarry is proposed to operate 24 hours a day, 7 days a week, which is the same as the operating hours of the existing quarry.

2.4 Supporting Documentation

The applicant submitted several supporting technical studies with their applications in support of the proposed quarry. The following studies were submitted by the applicant with their application:

- Hydrogeology Technical Report, Level 2, prepared by Golder Associates Ltd.
- Environmental Impact Statement Level 1 and 2 Natural Environment Technical Report, prepared by Golder Associates Ltd.
- Archaeology Assessment (Stages 1 & 2), prepared by Archaeologix Inc.
- Noise Assessment, prepared by Aercoustics Engineering Ltd.
- Blasting Impact Assessment, prepared by Golder Associates Ltd.

In addition to the above, CART recommended that the applicant should also be submitting an air quality study to address issues relating to dust on site and potential mitigation measures. Accordingly, the applicant submitted the following study in November, 2008:

- Air Quality Study, prepared by Pottinger Gaherty Environmental Consultants Ltd.

With the exception of the Natural Environment Report and the Archaeology Assessment, the above noted studies were peer reviewed by the CART peer review team (funded by the proponent). The Natural Environment Report and the Archaeology Assessment were reviewed by CART members. In addition to the above noted studies, further information was submitted to address concerns raised by CART. This information is discussed throughout this report.

2.5 Site Description

2.5.1 Lands Proposed for Extraction

The proposed North Quarry Extension lands are a small extension to the existing Dundas Quarry operation (See Appendix "A").

2.5.2 Natural Features, Setting & Geology

The aggregate underlying the property is Dolostone from the Guelph and Lockport formations. The subject site has thin overburden (1m on average) making it ideal for aggregate extraction. A Sun-Canadian Oil Pipeline easement provides a dividing line between the quarry operation and the residences located to the north of the proposed extension site.

The vegetation on the site is largely culturally affected anthropogenic communities that are dominated by non-native species or have a large component of non-native elements. There are no defined drainage features on the extension site. Intermittent surface flow drains toward the southeast corner of the site and is conveyed eastward to the Hayesland-Christie Wetland through several constructed swales.

The wildlife on site is generally characteristic of the rural agricultural landscape of Southern Ontario with elements that are widespread and abundant across most of the region.

Within the site there are five small woodland patches totaling 6.6 hectares, one locally uncommon species (false pennyroyal), two locally rare species (common juniper and clay-coloured sparrow) and two area sensitive species (grasshopper sparrow and savannah sparrow). The on-site woodlands and habitat for these species are not provincially significant and are proposed for removal. Approximately 0.1 hectares of a wetland patch extends onto the southeast corner of the site. The remainder of the wetland is located off-site. This wetland is a small (0.27 ha), isolated, seasonally wet feature that is maintained by surface water flow during spring and storm events. The wetland is a shrub thicket plant community dominated by common dogwood and willow species which are tolerant to fluctuations in soil moisture levels.

2.5.3 Surrounding Land Uses

A land survey of the area has identified eight residences, several landscape businesses and agricultural operations within 500 metres of the proposed extension lands. The surrounding land uses are illustrated on the attached Appendix “C”.

3.0 APPLICATION REVIEW

3.1 Applicable Legislation

The applications are being reviewed pursuant to the following legislation:

Aggregate Resources Act, R.S.O. 1990, c. A.8
Planning Act, R.S.O. 1990, c. P. 13

3.1.1 Aggregate Resources Act

Section 2 of the Aggregate Resources Act outlines the purpose of the Act as follows:

- (a) *to provide for the management of the aggregate resources of Ontario;*
- (b) *to control and regulate aggregate operations on Crown and private lands;*
- (c) *to require the rehabilitation of land from which aggregate has been excavated; and*
- (d) *to minimize adverse impact on the environment in respect of aggregate operations.*

Also, Section 12 of the Act states that in considering whether a licence should be issued or refused, the Minister or the Board, as the case may be, shall have regard to,

- (a) *the effect of the operation of the pit or quarry on the environment;*
- (b) *the effect of the operation of the pit or quarry on nearby communities;*
- (c) *any comments provided by a municipality in which the site is located;*
- (d) *the suitability of the progressive rehabilitation and final rehabilitation plans for the site;*
- (e) *any possible effects on ground and surface water resources;*
- (f) *any possible effects of the operation of the pit or quarry on agricultural resources;*
- (g) *any planning and land use considerations;*
- (h) *the main haulage routes and proposed truck traffic to and from the site;*
- (i) *the quality and quantity of the aggregate on the site;*
- (j) *the applicant's history of compliance with this Act and the regulations, if a licence or permit has previously been issued to the applicant under this Act or a predecessor of this Act; and*
- (k) *such other matters as are considered appropriate.*

Part 2 of the Act outlines the application process for the establishment of a new or expanded pit or quarry, including submission requirements, procedures for consultation and notification, and timing for decision-making.

3.1.2 Planning Act

The Planning Act is provincial legislation which sets out the ground rules for land use planning in Ontario and describes how land uses may be controlled, and who may control them. As is provided in Section 1.1 of the Act, its purposes are:

- (a) *to promote sustainable economic development in a healthy natural environment within the policy and by the means provided under this Act;*
- (b) *to provide for a land use planning system led by provincial policy;*
- (c) *to integrate matters of provincial interest in provincial and municipal planning decisions;*
- (d) *to provide for planning processes that are fair by making them open, accessible, timely and efficient;*
- (e) *to encourage co-operation and co-ordination among various interests;*
- (f) *to recognize the decision-making authority and accountability of municipal councils in planning.*

3.2 Review Process

The Combined Agency Review Team (CART) protocol is modeled on an approach originally developed by the Region of Halton. Rather than have each agency with an interest in the proposed quarry conduct its own technical reviews, the process provides an opportunity for the agencies to be represented on a team that retains expert peer reviewers, at the proponent's expense. The CART approach provides a forum for the agencies to share views and perspectives on the applications, and shared technical resources in the Peer Review Team. The information gained through CART is meant to assist each member agency in reaching their independent positions and decisions in the technical review of the applications. Where possible, CART will aim to forge consensus among member agencies on the technical aspects of the application, though it is recognized that this may not always be achieved. City of Hamilton Planning staff initiated the Combined Aggregate Review Team (CART) for the Lafarge Dundas North Quarry Extension in October 2007. The agencies included in the CART are:

- City of Hamilton;
- Ministry of Municipal Affairs and Housing;
- Ministry of Natural Resources;
- Ministry of the Environment;
- Conservation Halton; and,
- Hamilton Conservation Authority

The CART Peer Review Team is comprised of:

- Dillon Consulting – Hydrogeology, Hydrology and Quarry Design and Operations;
- IBI Group - Transportation;
- Jade Acoustics - Noise and Vibration;
- Church & Trought Inc. - Air Quality; and,
- Explotech – Blasting.

3.3 Public Participation

On August 24, 2007, in accordance with the Aggregate Resources Act, notice of complete application for a Category 2: Class "A" Quarry Below Water was mailed to all property owners within 120 metres of the subject lands, a sign was posted on the subject property, and notice was publicized in the local newspaper. In response to the public notice, the Ministry of Natural Resources received four responses from local residents with concerns related to water quality, noise, increased truck traffic and blasting.

On October 10, 2007, in accordance with the Planning Act, notice of complete applications was mailed to all property owners within 120 metres of the subject lands and a sign was posted on the subject property informing the public of

complete applications filed by Lafarge Canada Inc. for an Official Plan Amendment and Zoning By-law Amendment to permit the proposed Quarry extension. In response to the public notice, the City of Hamilton received two responses from local residents with concerns related to vibrations from the blasts, potential water issues, dust and noise. Additionally, a formal public meeting is required before a decision is made by Hamilton City Council on the Official Plan Amendment and Zoning By-law Amendment applications. In accordance with the Planning Act, all property owners within 120 metres of the subject property will be notified of the future formal public meeting.

On November 8, 2007, Lafarge Canada Inc. hosted a Public Information Session to present the details of the application. Twenty area residents attended and had questions and concerns related to the lifespan of the quarry, hours of operation and whether any new accesses to the quarry would be required if the extension was approved. As a result and in accordance with the ARA, several residents submitted objections to the Ministry of Natural Resources. However, all of these concerns have been addressed and the objections withdrawn.

4.0 POLICY FRAMEWORK

This section will outline the applicable policies considered during the review of the proposal, but determination of compliance/conformity with the policy framework is not within CART's mandate but rather informed the evaluation/assessment process.

4.1 Provincial Policy Statement (PPS)

The 2005 Provincial Policy Statement (PPS) is applicable to the subject proposal. The relevant policies related to this application are described below.

Part I: Preamble indicates that the PPS provides for appropriate development while protecting resources of provincial interest, public health and safety, and the quality of the natural environment.

Part IV: Vision for Ontario's Land Use Planning System states that the long-term prosperity and social well-being of Ontarians depend on maintaining strong communities, a clean and healthy environment and a strong economy.

The following specific policies are relevant to the subject proposal:

Section 1.0, Building Strong Communities, indicates that Ontario's long term economic prosperity, environmental health and social well-being depend on wisely managing change and promoting efficient land use and development patterns. Efficient land use and development patterns support strong, liveable

and healthy communities, protect the environment and public health and safety, and facilitate economic growth.

1.1 Managing and Directing Land use to Achieve Efficient Development and Land Use Patterns

1.1.1 Healthy, livable and safe communities are sustained by:

- a) promoting efficient development and land use patterns which sustain the financial well-being of the Province and municipalities over the long term;...*
- c) avoiding development and land use patterns which may cause environmental or public health and safety concerns;...*

1.1.4.1 In rural areas located in municipalities:

- a) permitted uses and activities shall relate to the management or use of resources, resource-based recreational activities, limited residential development and other rural land uses;...*
- d) locally-important agricultural and resource areas should be designated and protected by directing non-related development to areas where it will not constrain these uses;...*

1.6 Infrastructure and Public Service Facilities

1.6.4.1 Planning for sewage and water services shall:...

- b) ensure that these systems are provided in a manner that:
 - 1. can be sustained by the water resources upon which such services rely;*
 - 2. is financially viable and complies with all regulatory requirements; and*
 - 3. protects human health and the natural environment**
- c) promote water conservation and water use efficiency;*
- d) integrate servicing and land use considerations at all stages of the planning process...*

1.6.5.1 Transportation systems should be provided which are safe, energy efficient, facilitate the movement of people and goods, and are appropriate to address projected needs.

1.6.5.2 Efficient use shall be made of existing and planned infrastructure.

1.7 Long-term Economic Prosperity

1.7.1.1 Long-term economic prosperity should be supported by:

- a) *optimizing the long-term availability and use of land, resources, infrastructure and public service facilities;...*
- e) *planning so that major facilities (such as airports, transportation/transit/rail infrastructure and corridors, intermodal facilities, sewage treatment facilities, sewage treatment facilities, waste management systems, oil and gas pipelines, industries and resource extraction activities) and sensitive land uses are appropriately designed, buffered and /or separated from each other to prevent adverse effects from odour, noise and other contaminants, and minimize risk to public health and safety;...*

Section 2.0, Wise Use and Management of Resources, indicates that Ontario's long-term prosperity, environmental health, and social well-being depend on protecting natural heritage, water, agricultural, mineral and cultural heritage and archaeological resources for their economic, environmental and social benefits.

2.1 Natural Heritage

2.1.1 Natural features and areas shall be protected for the long term.

2.1.2 *The diversity and connectivity of natural features in an area, and the long-term ecological function and biodiversity of natural heritage systems, should be maintained, restored or, where possible, improved, recognizing linkages between and among natural heritage features and areas, surface water features and ground water features.*

2.1.5 *Development and site alteration shall not be permitted in fish habitat except in accordance with provincial and federal requirements.*

2.1.6 *Development and site alteration shall not be permitted on adjacent lands to the natural heritage features and areas identified in policies 2.1.3, 2.1.4 and 2.1.5 unless the ecological function of the adjacent lands has been evaluated and it has been demonstrated that there will be no negative impacts on the natural features or on their ecological functions.*

2.1.7 *Nothing in policy 2.1 is intended to limit the ability of existing agricultural uses to continue.*

2.2 Water

2.2.1 *Planning authorities shall protect, improve or restore the quality and quantity of water by:*

- a) *using the watershed as the ecologically meaningful scale for planning;*
- b) *minimizing potential negative impacts, including cross-jurisdictional and cross-watershed impacts;*
- c) *identifying surface water features, ground water features, hydrologic functions and natural heritage features and areas which are necessary for the ecological and hydrological integrity of the watershed;*
- d) *implementing necessary restrictions on development and site alteration to:*
 - 1. *protect all municipal drinking water supplies and designated vulnerable areas; and*
 - 2. *protect, improve or restore vulnerable surface and ground water, sensitive surface water features and sensitive ground water features, and their hydrologic functions;*
- e) *maintaining linkages and related functions among surface water features, ground water features, hydrologic functions and natural heritage features and areas;*
- f) *promoting efficient and sustainable use of water resources, including practices for water conservation and sustaining water quality; and*
- g) *ensuring stormwater management practices minimize stormwater volumes and contaminant loads, and maintain or increase the extent of vegetative and pervious surfaces.*

2.2.2 *Development and site alteration shall be restricted in or near sensitive surface water features and sensitive ground water features such that these features and their related hydrologic functions will be protected, improved or restored. Mitigative measures and/or alternative development approaches may be required in order to protect, improve or restore sensitive surface water features, sensitive ground water features, and their hydrologic functions.*

2.3 *Agriculture*

2.3.1 *Prime agricultural areas shall be protected for long-term use for agriculture.*

2.4 *Minerals and Petroleum*

- 2.5.1 *Mineral aggregate resources shall be protected for long-term use.*
- 2.5.2.1 *As much of the mineral aggregate resources as is realistically possible shall be made available as close to markets as possible. Demonstration of need for mineral aggregate resources, including any type of supply/demand analysis, shall not be required, notwithstanding the availability, designation or licensing for extraction of mineral aggregate resources locally or elsewhere.*
- 2.5.2.2 *Extraction shall be undertaken in a manner which minimizes social and environmental impacts.*
- 2.5.2.3 *The conservation of mineral aggregate resources should be promoted by making provision for the recovery of these resources, wherever feasible.*
- 2.5.2.4 *Mineral aggregate operations shall be protected from development and activities that would preclude or hinder their expansion or continued use or which would be incompatible for reasons of public health, public safety or environmental impact. Existing mineral aggregate operations shall be permitted to continue without the need for official plan amendment, rezoning or development permit under the Planning Act. When a license for extraction or operation ceases to exist, policy 2.5.2.5 continues to apply.*
- 2.5.2.5 *In areas adjacent to or in known deposits of mineral aggregate resources, development and activities which would preclude or hinder the establishment of new operations or access to the resources shall only be permitted if:*
- a) resource use would not be feasible; or*
 - b) the proposed land use or development serves a greater long-term public interest; and*
 - c) issues of public health, public safety and environmental impact are addressed.*
- 2.5.3.1 *Progressive and final rehabilitation shall be required to accommodate subsequent land uses, to promote land use compatibility, and to recognize the interim nature of extraction. Final rehabilitation shall take surrounding land use and approved land use designations into consideration.*
- 2.6 *Cultural Heritage and Archaeology*
- 2.6.2 *Development and site alteration shall only be permitted on lands containing archaeological resources or areas of archaeological potential*

if the significant archaeological resources have been conserved by removal and documentation, or by preservation on site. Where significant archaeological resources must be preserved on site, only development and site alteration which maintain the heritage integrity of the site may be permitted.

Section 3.0, Protecting Public Health and Safety, states “Ontario's long-term prosperity, environmental health and social well-being depend on reducing the potential for public cost or risk to Ontario’s residents from natural or human-made hazards. Development shall be directed away from areas of natural or human-made hazards where there is an unacceptable risk to public health or safety or of property damage”.

3.1 NATURAL HAZARDS

3.1.1 Development shall generally be directed to areas outside of:

- a) hazardous lands adjacent to the shorelines of the Great Lakes - St. Lawrence River System and large inland lakes which are impacted by flooding hazards, erosion hazards and/or dynamic beach hazards;*
- b) hazardous lands adjacent to river, stream and small inland lake systems which are impacted by flooding hazards and/or erosion hazards; and*
- c) hazardous sites.*

3.1.2 Development and site alteration shall not be permitted within:

- c) areas that would be rendered inaccessible to people and vehicles during times of flooding hazards, erosion hazards and/or dynamic beach hazards, unless it has been demonstrated that the site has safe access appropriate for the nature of the development and the natural hazard; and*
- d) a floodway regardless of whether the area of inundation contains high points of land not subject to flooding.*

3.1.3 Despite policy 3.1.2, development and site alteration may be permitted in certain areas identified in policy 3.1.2:

- b) where the development is limited to uses which by their nature must locate within the floodway, including flood and/or erosion control works or minor additions or passive non-structural uses which do not affect flood flows.*

3.1.6 *Further to policy 3.1.5, and except as prohibited in policies 3.1.2 and 3.1.4, development and site alteration may be permitted in those portions of hazardous lands and hazardous sites where the effects and risk to public safety are minor so as to be managed or mitigated in accordance with provincial standards, as determined by the demonstration and achievement of all of the following:*

- a) *development and site alteration is carried out in accordance with floodproofing standards, protection works standards, and access standards;*
- b) *vehicles and people have a way of safely entering and exiting the area during times of flooding, erosion and other emergencies;*
- c) *new hazards are not created and existing hazards are not aggravated; and*
- d) *no adverse environmental impacts will result.*

3.2.1 *Development on, abutting or adjacent to lands affected by mine hazards; oil, gas and salt hazards; or former mineral mining operations, mineral aggregate operations or petroleum resource operations may be permitted only if rehabilitation measures to address and mitigate known or suspected hazards are under-way or have been completed.*

Section 4.0, Implementation and Interpretation, outlines the applicability of the PPS and notes that it “shall be read in its entirety and all relevant policies are to be applied to each situation”. Also, the PPS does not prevent planning authorities and decision-makers from going beyond the minimum standards established in specific policies.

4.2 Greenbelt Plan 2005

The Greenbelt Plan, 2005 is applicable to the subject proposal. The relevant policies related to this application are provided below. It should be noted that the subject lands are designated “Protected Countryside - Rural” and located within the Natural Heritage System.

1.2.2 Goals

To enhance our urban and rural areas and overall quality of life by promoting the following matters within the Protected Countryside:

1.2.2.1. Agricultural Protection

- a) *Protection of the specialty crop area land base while allowing supportive infrastructure and value added uses necessary for sustainable agricultural uses and activities;...*

- d) *Provision of the appropriate flexibility to allow for agriculture, agriculture-related and secondary uses, normal farm practices and an evolving agricultural/rural economy; and*
- e) *Increasing certainty for the agricultural sector to foster long-term investment in, improvement to, and management of the land.*

1.2.2.2 Environmental Protection

- a) *Protection, maintenance and enhancement of natural heritage, hydrologic and landform features and functions, including protection of habitat for flora and fauna and particularly species at risk;*
- b) *Protection and restoration of natural and open space connections between the Oak Ridges Moraine, the Niagara Escarpment, Lake Ontario, Lake Simcoe and the major river valley lands, while also maintaining connections to the broader natural systems of southern Ontario beyond the Golden Horseshoe such as the Great Lakes Coast, the Carolinian Zone, the Lake Erie Basin, the Kawartha Highlands and the Algonquin to Adirondacks Corridor;*
- c) *Protection, improvement or restoration of the quality and quantity of ground and surface water and the hydrological integrity of watersheds; and*
- d) *Provision of long-term guidance for the management of natural heritage and water resources when contemplating such matters as development, infrastructure, open space planning and management, aggregate rehabilitation and private or public stewardship programs.*

1.2.2.3. Culture, Recreation and Tourism

- a) *Support for the conservation and promotion of cultural heritage resources;*

1.2.4. Settlement Areas

- a) *Support for a strong rural economy by allowing for the social, economic and service functions through the residential, institutional and commercial/industrial uses needed by the current and future population within the Greenbelt, particularly within settlements; and*
- b) *Sustaining the character of the countryside and rural communities.*

1.2.2.5. Infrastructure and Natural Resources

- a) *Support for infrastructure which achieves the social and economic aims of the Greenbelt and the proposed Growth Plan while seeking to minimize environmental impacts;*
- b) *Recognition of the benefits of protecting renewable and non-renewable natural resources within the Greenbelt; and*
- c) *Provision for the availability and sustainable use of those resources critical to the region's social, environmental, economic and growth needs.*

3.2.2 Natural Heritage System Policies

For lands within the Natural Heritage System of the Protected Countryside the following policies shall apply:

- 3. *New development or site alteration in the Natural Heritage System (as permitted by the policies of this Plan) shall demonstrate that:*
 - a) *There will be no negative effects on key natural heritage features or key hydrologic features or their functions;*
 - b) *Connectivity between key natural heritage features and key hydrologic features is maintained, or where possible, enhanced for the movement of native plants and animals across the landscape;*
 - c) *The removal of other natural features not identified as key natural heritage features and key hydrologic features should be avoided. Such features should be incorporated into the planning and design of the proposed use wherever possible; and*
 - d) *The disturbed area of any site does not exceed 25 percent, and the impervious surface does not exceed 10 percent, of the total developable area, except for uses described in and governed by sections 4.1.2 and 4.3.2. With respect to golf courses, the disturbed area shall not exceed 40 percent of the site.*
- 4. *Where non-agricultural uses are contemplated within the Natural Heritage System, applicants shall demonstrate that:*
 - a) *At least 30 percent of the total developable area of the site will remain or be returned to natural self-sustaining vegetation, recognizing that section 4.3.2 establishes specific standards for the uses described there;*
 - b) *Connectivity along the system and between key natural heritage features or key hydrologic features located within 240 metres of each other is maintained or enhanced; and*

- c) *Buildings or structures do not occupy more than 25 percent of the total developable area and are planned to optimize the compatibility of the project with the natural surroundings.*
7. *Where regulations or standards of other agencies or levels of government exceed the standards related to key natural heritage features or key hydrologic features in this Plan, such as may occur with hazardous lands under section 28 of the Conservation Authorities Act or with fisheries under the Federal Fisheries Act, the most restrictive provision or standard applies.*

3.2.3 Water Resource System Policies

The following Water Resource System policies apply throughout the Protected Countryside:

1. *All planning authorities shall provide for a comprehensive, integrated and long-term approach for the protection, improvement or restoration of the quality and quantity of water. Such an approach will consider all hydrologic features and functions and include a systems approach to the inter-relationships between and/or among recharge/discharge areas, aquifers, headwaters and surface waters (e.g. lakes as well as rivers and streams, including intermittent streams).*
2. *Watersheds are the most meaningful scale for hydrological planning, and municipalities together with conservation authorities should ensure that watershed plans are completed and used to guide planning and development decisions within the Protected Countryside.*
3. *Cross-jurisdictional and cross-watershed impacts need to be considered in the development of watershed plans. The development of watershed plans and watershed management approaches in the Protected Countryside should be integrated with watershed planning and management in the NEP and the ORMCP areas and beyond the Greenbelt.*
4. *Municipalities shall, in accordance with provincial direction related to the protection of source water, protect vulnerable surface and ground water areas, such as wellhead protection areas, from development that may adversely affect the quality and quantity of ground and surface waters.*

3.2.4 Key Natural Heritage Features and Key Hydrologic Features Policies

Key natural heritage features include:

- *Significant habitat of endangered species, threatened species and special concern species;*
- *Fish habitat;*

- *Wetlands;*
- *Life Science Areas of Natural and Scientific Interest (ANSIs);*
- *Significant valleylands;*
- *Significant woodlands;*
- *Significant wildlife habitat;*
- *Sand barrens, savannahs and tallgrass prairies; and*
- *Alvars*

Key hydrologic features include:

- *Permanent and intermittent streams;*
- *Lakes (and their littoral zones);*
- *Seepage areas and springs; and*
- *Wetlands*

For lands within a key natural heritage feature or a key hydrologic feature in the Protected Countryside, the following policies shall apply:

1. *Development or site alteration is not permitted in key hydrologic features and key natural heritage features within the Natural Heritage System, including any associated vegetation protection zone, with the exception of:*
 - a) *Forest, fish and wildlife management;*
 - b) *Conservation and flood or erosion control projects, but only if they have been demonstrated to be necessary in the public interest and after all alternatives have been considered; or*
 - c) *Infrastructure, aggregate, recreational, shoreline and existing uses, as described by and subject to the general policies of section 4 of this Plan.*
2. *Beyond the Natural Heritage System within the Protected Countryside (as shown on Schedule 4), key hydrologic features are defined by and subject to the natural features policies of section 3.2.4.*
3. *Beyond the Natural Heritage System within the Protected Countryside (as shown on Schedule 4), key natural heritage features are not subject to the natural features policies of section 3.2.4 of this Plan, but are to be defined pursuant to, and subject to the policies of, the PPS.*
4. *In the case of wetlands, seepage areas and springs, fish habitat, permanent and intermittent streams, lakes, and significant woodlands, the minimum vegetation protection zone shall be a minimum of 30 metres wide measured from the outside boundary of the key natural heritage feature or key hydrologic feature.*
5. *A proposal for new development or site alteration within 120 metres of a key natural heritage feature within the Natural Heritage System or a key*

hydrologic feature anywhere within the Protected Countryside requires a natural heritage evaluation and hydrological evaluation, which identify a vegetation protection zone which:

- a) *Is of sufficient width to protect the key natural heritage feature or key hydrologic feature and its functions from the impacts of the proposed change and associated activities that may occur before, during, and after, construction, and where possible, restore or enhance the feature and/or its function; and*
- b) *Is established to achieve, and be maintained as natural self-sustaining vegetation.*

3.2.5 External Connections

The Natural Heritage System is connected to local, regional and provincial scale natural heritage, water resource and agricultural systems beyond the boundaries of the Greenbelt. To support the connections between the Greenbelt’s Natural System and the local, regional and broader scale natural heritage systems of southern Ontario, such as the Lake Ontario shoreline, including its remaining coastal wetlands, the Great Lakes Coast, Lake Simcoe, the Kawartha Highlands, the Carolinian Zone and the Algonquin to Adirondack Corridor, the federal government, municipalities, conservation authorities, other agencies and stakeholders should:

1. *Consider how activities and land use change both within and abutting the Greenbelt relate to the areas of external connections identified in this Plan;*
2. *Promote and undertake appropriate planning and design to ensure that external connections are maintained and/or enhanced; and*
3. *Undertake watershed based planning, which integrates supporting ecological systems with those systems contained in this Plan.*

The river valleys that run through existing or approved urban areas and connect the Greenbelt to inland lakes and the Great Lakes are a key component of the long-term health of the Natural System. In recognition of the function of the urban river valleys, municipalities and conservation authorities should:

1. *Continue with stewardship, remediation and appropriate park and trail initiatives which maintain and, to the extent possible, enhance the ecological features and functions found within these valley systems;*

4.3.2 Non-Renewable Resource Policies

For lands within the Protected Countryside, the following policies shall apply:

1. *Activities related to the use of non-renewable resources are permitted in the Protected Countryside, subject to all other applicable legislation, regulations and municipal official plan policies and by-laws. The availability of mineral aggregate resources for long-term use will be determined in accordance with the PPS, except as provided below.*
2. *Non-renewable resources are those non-agriculture based natural resources that have a finite supply, including mineral aggregate resources. Aggregates, in particular, provide significant building materials for our communities and infrastructure, and the availability of aggregates close to market is important both for economic and environmental reasons.*
3. *Notwithstanding the Natural System policies of section 3.2 of this Plan, within the Natural Heritage System, mineral aggregate operations and wayside pits and quarries are subject to the following:*
 - a) *No new mineral aggregate operation and no wayside pits and quarries, or any ancillary or accessory use thereto will be permitted in the following key natural heritage features and key hydrologic features:*
 - i. *Significant wetlands ;*
 - ii. *Significant habitat of endangered species and threatened species; and*
 - iii. *Significant woodlands unless the woodland is occupied by young plantation or early successional habitat (as defined by the Ministry of Natural Resources). In this case, the application must demonstrate that the specific provisions of policy 4.3.2.5 (c), (d) and 4.3.2.6 (c) have been addressed, and that they will be met by the operation;*
 - b) *An application for a new mineral aggregate operation or new wayside pits and quarries may only be permitted in other key natural heritage features and key hydrologic features not identified in 4.3.2.3 (a) and any vegetation protection zone associated with such other feature where the application demonstrates:*
 - i. *How the Water Resource System will be protected or enhanced; and*
 - ii. *That the specific provisions in 4.3.2.5 (c), (d) and 4.3.2.6 (c) have been addressed, and that they will be met by the operation.*

- c) *Any application for a new mineral aggregate operation, or the expansion of an existing mineral aggregate operation shall be required to demonstrate:*
 - i. *How the connectivity between key natural heritage features and key hydrologic features will be maintained before, during and after the extraction of mineral aggregates;*
 - ii. *How the operator could immediately replace any habitat that would be lost from the site with equivalent habitat on another part of the site or on adjacent lands; and*
 - iii. *How the Water Resource System will be protected or enhanced; and*
 - d) *An application for the expansion of an existing mineral aggregate operation may be permitted in the Natural Heritage System, including key natural heritage features and key hydrologic features, and in any associated vegetation protection zone only if the related decision is consistent with the PPS.*
4. *The Ministry of Natural Resources will pursue the following under the Aggregate Resources Act, for all mineral aggregate operations, including wayside pits and quarries, within the Protected Countryside:*
- a) *Rehabilitated area will be maximized and disturbed area minimized on an ongoing basis during the life-cycle of an operation;*
 - b) *Progressive and final rehabilitation efforts will contribute to the goals of the Greenbelt Plan;*
 - c) *The Ministry of Natural Resources will determine the maximum allowable disturbed area of each mineral aggregate operation. Any excess disturbed area above the maximum will be required to be rehabilitated. For existing operations this shall be completed within 10 years of the date of approval of the Greenbelt Plan, and 50% completed within six years. For new operations, including expansions, the total disturbed area shall not exceed an established maximum allowable disturbed area; and*
 - d) *An application for a mineral aggregate operation or wayside pits and quarries may be permitted only where the applicant demonstrates that the quantity and quality of groundwater and surface water will be maintained as per Provincial Standards under the Aggregate Resources Act.*
5. *When operators are undertaking rehabilitation of mineral aggregate operation sites in the Protected Countryside, the following provisions apply:*

- a) *The aggregate industry will work with the Ministry of Natural Resources to consider the development and implementation of comprehensive rehabilitation plans in areas of high concentration of mineral aggregate operations;*
 - b) *The disturbed area of a site will be rehabilitated to a state of equal or greater ecological value, and for the entire site, long-term ecological integrity will be maintained or restored, and to the extent possible, improved;*
 - c) *If there are key natural heritage features or key hydrologic features on the site, or if such features existed on the site at the time of application:*
 - i. *The health, diversity and size of these key natural heritage features and key hydrologic features will be maintained or restored and, to the extent possible, improved to promote a net gain of ecological health; and*
 - ii. *Any permitted extraction of mineral aggregates that occurs in a feature will be completed, and the area will be rehabilitated, as early as possible in the life of the operation.*
 - d) *Aquatic areas remaining after extraction are to be rehabilitated to aquatic enhancement, which shall be representative of the natural ecosystem in that particular setting or ecodistrict, and the combined terrestrial and aquatic rehabilitation shall meet the intent of 4.3.2.5 (c).*
 - e) *Outside the Natural Heritage System, and except as provided in 4.3.2.5 (b), (c) and (d), final rehabilitation will appropriately reflect the long-term land use of the general area, taking into account applicable policies of this Plan and, to the extent permitted under this Plan, existing municipal and provincial policies.*
6. *Final rehabilitation in the Natural Heritage System will meet these additional provisions:*
- a) *Where there is no underwater extraction, an amount of land equal to that under natural vegetated cover prior to extraction, and no less than 35% of each license, is to be rehabilitated to forest cover, which shall be representative of the natural ecosystem in that particular setting or ecodistrict;*
 - b) *Where there is underwater extraction, no less than 35% of the non-aquatic lands of each license is to be rehabilitated to forest cover,*

which shall be representative of the natural ecosystem in that particular setting or ecodistrict; and

- c) Rehabilitation will be implemented so that the connectivity of the key natural heritage features and the key hydrologic features on the site and on adjacent lands will be maintained or restored, and to the extent possible, improved.*
- 7. Operators are encouraged to consider and provide for public access to former aggregate sites upon final rehabilitation.*
- 10. Municipalities should ensure that all land use activities related to the post extraction rehabilitation of mineral aggregate operations are consistent with any relevant approved source protection plan and relevant watershed or sub-watershed plan.*

4.4 Cultural Heritage Resources

For lands within the Protected Countryside, the following policies shall apply:

- 1. Cultural heritage resources are defined as man-made or natural features, including structures, objects, neighbourhoods, landscapes and archaeological sites, that have been identified as significant by the local municipality or the province for being meaningful components of a community’s cultural heritage or identity.*

4.3 Places to Grow - Growth Plan for the Greater Golden Horseshoe

The Places to Grow Plan (P2G) is applicable to the subject proposal. The relevant policies of the P2G related to this application are outlined below.

4.2.1 Natural Systems

- 2. For lands within the Greenbelt Area, all policies regarding natural systems set out in provincial plans, applicable to lands within the Greenbelt Area, continue to apply.*

4.2.3 Mineral Aggregate Resources

- 1. Through sub-area assessment, the Ministers of Public Infrastructure Renewal and Natural Resources will work with municipalities, producers of mineral aggregate resources, and other stakeholders to identify significant mineral aggregate resources for the GGH, and to develop a long-term strategy for ensuring the wise use, conservation, availability and management of mineral aggregate resources in the GGH, as well as*

identifying opportunities for resource recovery and for co-coordinated approaches to rehabilitation where feasible.

4.4 Hamilton-Wentworth Official Plan (HWOP)

The Hamilton-Wentworth Official Plan (HWOP) applies to the subject proposal. The relevant policies related to this application are provided below. It should be noted that the subject lands are designated “Rural Area” on Map No. 1 - Regional Development Pattern, “Rural” on Map No. 2 – Agricultural Lands and Niagara Escarpment Plan Area, located within Environmentally Significant Area No. 28 (Hayesland Complex) on Map No. 4 – Environmentally Significant Areas, identified as “Stone Aggregates” on Map No. 5 - Mineral Aggregate Areas, and located adjacent to a Provincially Significant Wetland as identified on Appendix Map No. 1 – Wetlands and Streams. The relevant policies of the HWOP related to this application are outlined below.

B-9 Historical Resources

9.2 *Consider protection and preservation of Regionally significant historical and cultural resources, including recognized archaeological sites, in the review of proposals for development and re-development. Where possible, these attributes will be incorporated into the overall design in a manner which minimizes adverse impacts and encourages maintenance and protection.*

C-1.2 Environmentally Significant Areas

To protect natural features, the Region will:

1.2.1 *Designate Environmentally Significant Areas as shown on Map No. 4.*

1.2.2 *Apply the following policies in assessing the merits of proposed changes in land use within and adjacent to Environmentally Significant Areas;*

a) *land use changes in or adjacent to Environmentally Significant Areas will only be permitted where, in addition to meeting other policies in this plan, such development:*

i) *will not adversely affect, degrade or destroy any of the qualities which are the basis for the area’s designation;*

ii) *will not cause any significant impacts upon water quality and quantity; and,*

iii) *will not adversely affect the implementation of any resource protection policies or plans.*

- b) *proposed changes will be referred to the Environmentally Significant Areas Impact Evaluation Group (ESAIEG) for review. ESAIEG will advise Regional Environment staff on whether the proposed changes satisfy the intent of Policy C-1.2.2.*
- c) *in assessing the appropriateness of the proposed change, the proponent may be required to submit an Environmental Impact Statement which may include plans/studies, environmental analyses, cumulative impact assessments, buffer requirements, or other associated documentation considered necessary by ESAIEG.*
- d) *land use changes will not be permitted within Provincially Significant Wetland Areas, as shown on Appendix Map No. 1, and as updated from time to time by the MNR. Development on land adjacent to a provincially significant wetland (land within 120 meters of a wetland area or lands connecting individual wetland areas within a wetland complex), with the exception of existing agricultural activities, will be prohibited unless it can be demonstrated through an Environmental Impact Statement, prepared in accordance with Provincial guidelines, that it does not result in any of the following:*
 - i) *loss of wetland functions;*
 - ii) *subsequent demand for future development which will adversely affect existing wetland functions;*
 - iii) *conflict with existing site-specific wetland management practices; and,*
 - iv) *loss of contiguous wetland area.*
- h) *boundaries of Environmentally Significant Areas, found in the Regional Official Plan or Secondary Plans, are general in nature and more precise boundaries may be defined by Environmental Impact Statements (without amendment to this Plan).*

C-2 Resource Utilization

While certain natural features require protection from use or development to maintain their integrity, others require measures which permit utilization for essential purposes, as well as protection. These types of resources are vital for life and in some cases economic prosperity. This challenge of use versus protection is addressed in this section of the Plan not only for soils, but also mineral aggregates and groundwater.

C-2.2 Mineral Aggregates

Mineral aggregates are essential non-renewable resources that should be available with minimal environmental and social disruption. The Provincial Government has expressed its interest in this area through a Policy Statement on Mineral Aggregate Resources. The Region intends to protect and ensure the proper management (including progressive rehabilitation) of aggregate resources in concert with the preservation of environmental features and agricultural land.

As a result, the Region will:

- 2.2.1 Designate Mineral Aggregate Resource areas on Map No.5, to protect these areas for future mineral aggregate extraction. The location of these areas may be refined, without amendment to this Plan, in Area Municipal Official Plans.*
- 2.2.2 Require Area Municipalities to identify Mineral Aggregate Resource areas and legally existing pits and quarries in their Official Plans and include policies for the protection of these areas from land uses which are incompatible with possible future extraction. Other uses permitted in association with extraction operations are to be detailed in the Area Municipal Official Plans in accordance with Section 2.3 of the Mineral Aggregate Resources Policy Statement.*
- 2.2.3 Require Area Municipalities to provide policies in their Official Plans for the establishment of new, and the expansion of existing pits and quarries.*
- 2.2.4 Request the rehabilitation of all pits and quarries and the progressive rehabilitation of operating pits and quarries. Progressive rehabilitation refers to simultaneous stripping, extraction and rehabilitation of pits and quarries.*
- 2.2.5 Require Area Municipalities to pass by-laws to regulate the establishment and operation of extractive operations.*
- 2.2.6 Consider a change in the designation in this Plan for an extractive operation where:
 - a) the license for the operation has been cancelled; and,*
 - b) rehabilitation is being or has been undertaken to the satisfaction of the Region, Area Municipality, and affected agencies.**

Such a change will be consistent with the rehabilitation plan and with applicable Regional and Area Municipal Official Plan policies.

2.2.8 *Monitor aggregate resource extraction operations within the Region for the purpose of analyzing effects on the environment, transportation and road facilities, and rehabilitation activities.*

2.2.9 *Require the proposals to establish new or expand existing extractive operations must include provisions to minimize negative impacts on surrounding areas. Where such operations abut Environmentally Significant Areas, the matter may be referred to the ESAIEG.*

2.3 *Groundwater*

Streams, lakes and groundwater fulfill a vital ecological function and have to be protected. Changes in the hydrological cycle will eventually be passed on throughout the system. Protecting groundwater will benefit the entire system, including Lake Ontario, Hamilton Harbour and Cootes Paradise, and make Hamilton-Wentworth a cleaner place to live.

To maintain and improve groundwater quality and retain its role in the water cycle, the Region will:

2.3.1 *Permit development in Rural Areas only where:*

- a) *groundwater is a viable long-term source of potable water;*
- b) *cumulative impacts of development including landscape alternations and/or septic system uses will not threaten the quantity or quality of groundwater resources; and,*
- c) *the physical, economic and land use implications of communal systems have been evaluated. (Also refer to Policy C 4.2.1.3).*

3.2.3 *Rural Economic Activity*

In addition to the preservation of the rural landscape and lifestyle, the Region also supports the promotion of agricultural viability and the creation of compatible economic opportunities in rural areas.

Although it is the general intention of the Region to direct all industrial and business activities to Urban Business Parks and established industrial areas or retail centres, it is acknowledged that some types of business require a rural location and therefore such employment and economic opportunities may be considered. As a result the Region will:

3.2.3.1 *Consider in the Rural Area, as shown on Map No. 1, individual commercial and industrial uses only if they are directly related to and serve the agricultural community or directly utilize the natural resources of the Rural Area. Such uses will not be permitted to locate within the*

Niagara Escarpment Plan - Natural and Protection Areas, will be directed away from prime agricultural land, and where possible, will be located within designated Rural Business Parks or Rural Settlement Areas. Such uses will only be permitted in locations where:

- a) ground and surface water resources are not threatened;*
- b) adequate transportation services are available;*
- c) municipal water or sewer services are not required;*
- d) agricultural operations will not be disturbed, will comply with the Minimum Distance Separation formula; and,*
- e) the aesthetic and functional characteristics of the rural landscape will not be compromised.*

4.5 Town of Flamborough Official Plan

The Town of Flamborough Official Plan applies to the subject proposal. The subject lands are designated “Agriculture” on Schedule B – Rural Land Use Plan, identified as “Mineral Aggregate Resource Lands” on Schedule J – mineral Aggregate Areas. An Official Plan Amendment application has been submitted to *redesignated the subject lands from “Agricultural” to “Extractive Industrial”*. The following policies apply to the subject proposal:

B.7 EXTRACTIVE INDUSTRIAL

OBJECTIVE: To ensure that aggregate extraction occurs with minimal social and environmental effects and that extraction sites are rehabilitated to an after-use which conforms to this Plan.

It is the intent of Council to recognize the local, regional and provincial significance of MINERAL AGGREGATE RESOURCES within the Town and to provide for the establishment of extractive operations and their long term protection from incompatible land uses. In this regard, the establishment or expansion of pits and quarries shall require amendment to this Plan and the Town's Zoning By-law. Further, Council shall encourage the rehabilitation of pits and quarries to an after-use which conforms to this Official Plan.

B.7.3 The establishment of new pits and quarries or the expansion of existing operations beyond their boundaries as shown on Schedule ‘B’ shall require an amendment to this Plan and to the Zoning By-law.

B.7.4 When considering amendments to the Plan for the establishment of new pits and quarries or the expansion of existing operations, the following matters will be evaluated by Council:

- (i) *compatibility with adjacent existing and planned land uses;*
- (ii) *demonstration of the need for, and benefit of additional aggregate resource extraction;*
- (iii) *potential impacts on the environment, including measures required to minimize any adverse impacts;*
- (iv) *potential impacts on the transportation system;*
- (v) *the capability of the land for agricultural uses and for the rehabilitation to a use which conforms to this Official Plan or back to an agricultural use where Soil Classes 1 to 4 have been defined. Such lands shall be rehabilitated back to substantially the same acreage and average soil capability for agriculture; and,*
- (vi) *other such matters as Council deems necessary.*

B.7.5 All applications for amendments to the Plan shall include the following:

- (i) *the location, dimensions, topography, size and description of the site proposed for a Mineral Resource Extraction Area;*
- (ii) *the location, height, dimensions and use of all buildings or structures existing or proposed to be erected on the site;*
- (iii) *the location, quality and estimated quantity of the mineral resources;*
- (iv) *the use of all land, and the location and use of all buildings and structures lying within a distance of 150 metres (500 feet) of the boundaries of the site;*
- (v) *existing and anticipated final grades of all lands and excavation and the limits of excavation within the site;*
- (vi) *surface water diversion, storage and drainage provisions;*
- (vii) *all entrances, exits and proposed routes to be used by associated transport;*
- (viii) *locations of stockpiles for overburden stripping and mineral resources;*
- (ix) *proposed tree screening and berming;*
- (x) *sequential and final rehabilitation plans;*
- (xi) *extent of adjacent property holdings which may be intended for future mineral resource extraction operations, where appropriate;*
- (xii) *hydrology, soil, wildlife or vegetation studies which may be required by Council due to specific site concerns; and,*
- (xiii) *other information as Council deems necessary.*

C.4 HAZARD LANDS

C.4.1 The uses permitted in the areas delineated on Schedules 'A', 'E' and 'B-1' to 'B-16' as HAZARD LANDS shall be limited to: conservation, forestry, agriculture, horticultural nurseries, fish and wildlife management areas, low intensity or passive type public or private recreational uses, and uses legally existing at the time of

approval of this Plan. Buildings and structures associated with these uses will not be permitted unless they are intended for flood and erosion control and meet the requirements of the Town and the presiding Conservation Authority.

- C.4.2 No development, including the placing or removal of fill shall be permitted without the written approval of the presiding Conservation Authority. However, buildings, structures or other works associated with flood or erosion control, drainage or watercourse protection may be permitted if such works are approved by the presiding Conservation Authority.*
- C.4.3 Council shall co-operate with the presiding Conservation Authority to determine the boundaries of HAZARD LANDS. In this regard, an amendment to this Plan will not be required for changes to HAZARD LAND boundaries which are deemed to be suitable by Council, and the presiding Conservation Authority. Council may amend this Plan, to incorporate more detailed HAZARD LAND mapping as it becomes available.*
- C.4.6 All lots which may abut a watercourse or its tributaries shall be subject to specific Zoning By-law regulations regarding lot area and setbacks from the watercourse and its tributaries. These requirements may be reduced, by amendment to the Zoning By-law, subject to the requirements of the presiding Conservation Authority, the Ministry of Natural Resources and the Regional Department of Health Services.*
- C.4.7 Council recognizes that, in some cases, the use of Storm Water Management techniques may be appropriate on lands subject to flooding conditions, in order to remove the flooding condition or reduce it to a level where, with appropriate flood proofing measures, development may be possible. Where such undertakings are proposed, Council may consider development proposals subject to an amendment to the Plan and Zoning By-law, and subject to the approval of the presiding Conservation Authority.*
- C.4.10 Any privately held lands delineated as HAZARD LANDS shall not be considered as free and open to the general public, nor will it imply that such lands will necessarily be acquired by a public authority.*

E.2 HERITAGE PRESERVATION

- E.2.1 Council shall encourage the conservation and restoration of Heritage features in the Town, which may include archaeological sites, buildings, structures and streetscapes of historical and architectural value.*

E.2.6 Council recognizes that there may be sites with archaeological significance in the Town which warrant conservation. Accordingly, where there is indication that archaeological potential exists, Council shall consult with the appropriate governmental agencies for advice concerning the conservation of such sites.

4.6 Flamborough Zoning By-law No. 90-145-Z

The subject lands are zoned Agricultural (A) and Conservation Management (CM) in the Town of Flamborough Zoning By-law No. 90-145-Z. A zoning by-law amendment application has been submitted to rezone these lands to the Extractive Industrial (EI) category in order to permit the North Quarry Extension proposal.

4.7 Summary

CART reviewed the subject proposal against the applicable legislation and policies discussed above, with focus on the following topics: natural heritage, water resources, archaeology, noise, air quality, blasting, traffic and rehabilitation. The following sections summarize CART’s review of these topics. Also, Appendix “D” is the proposed ARA Site Plan, which provides an existing features map, operational plan, rehabilitation plan and cross sections. If approved, these plans would form part of the license in accordance with the ARA and provide the requirements to address many of CART’s concerns that are discussed in this report.

5.0 NATURAL HERITAGE

5.1 Overview

Natural heritage includes the natural features, such as woodlands, wetlands, and streams, the fish and wildlife that occupy these areas, and the ecological functions (i.e., clean water, biodiversity, flood control) that they provide. Natural heritage also relates to the landscape, soils, geology, air, and water, and how they interact to create an ecological system that supports life.

Within this section of the report, CART has included a summary of the existing information on the site and the surrounding area, which may be affected by the quarry expansion proposal. Most of this information was gathered from the Natural Environment Technical Report (Golder Natural Heritage Report) which was completed by Golder Associates Ltd. (Golder) on behalf of the applicant, Lafarge. Additional information was taken from the Nature Counts, 2003 Inventory of Natural Areas in Hamilton, completed by the Hamilton Naturalists’

Club, the City of Hamilton, Conservation Halton, and the Hamilton Conservation Authority.

This section will describe existing conditions of the natural environment at the subject property and lands within its vicinity, and outline the issues relating to natural heritage.

5.2 Physiography

The Dundas North Quarry and the proposed extension are located on a flat-lying limestone plain (the Flamborough Plain), approximately 3 km north-northwest of the town of Dundas. Appendix “F” illustrates the regional bedrock geology and elevation. The topography of the area is generally flat, with gently rolling hills. Elevations range between 250 and 260 metres. The study area is located on the Flamborough Plain physiographic region (Chapman and Putnam, 1984), a flat-lying limestone plain with shallow, stony glacial till and gravels, and scattered drumlins. As a result of the flatness of the area, swampy wetlands have developed along many sections of the streams that drain the plain, including Beverly Swamp and the Hayesland Swamp.

There are no surface water features on the site, but the western tributaries of Grindstone Creek, and the associated wetlands, are adjacent to the site. Seasonal runoff from portions of the site collects at the southeast corner and discharges into one of several swales which drain into a small wetland on site.

Bedrock is at or near the surface throughout this area; overburden deposits are generally less than 1 metre thick. Bituminous dolostone of the Eramosa Member of the Amabel Formation outcrops west of Hayesland. Brown dolostone of the overlying Guelph Formation outcrops in the southwestern, southern, and southeastern portions of the study area, and is also present immediately to the northwest of the northern section.

A notable feature of the extensive bedrock surface exposed in the study area is the presence of karstic solution features including widened joints, small sinkholes, and dolostone pavements⁴⁵⁹. Karrow noted that: “Such features are relatively rare in the dolostone rock of the region”²⁰². The karst features of this study area constitute a significant earth science feature in Hamilton⁴⁵⁹.

The entire study area lies within a “selected bedrock resource area” identified by the Ontario Geological Survey²⁰³. Two large, deep (7 to 15 m) quarries are located outside the southern and eastern boundaries of the study area. Both produce a variety of products from the Guelph Formation and the underlying Eramosa Member⁴⁵⁹.

5.2.1 Watersheds

The Lafarge Dundas North Quarry is located along the watershed divide between the Spencer and Grindstone Creeks. This watershed divide is coincident with limit of the eastern extraction boundary of the North Quarry within the study area. Since the quarry drains to the Spencer Creek any extraction to the east extending into the Grindstone Creek watershed diverts flows to the Spencer Creek and affects the location of the watershed divide. Both creeks drain to Hamilton Harbour.

The study area is located within the catchment area of the western tributary of Grindstone Creek watershed, which is in the jurisdiction of Conservation Halton. However, the Hamilton Conservation Authority was involved in the review of this application, because the subject property lies on the watershed divide between the Spencer Creek and Grindstone Creek. Because the study area lies at a watershed boundary, policies from both Conservation Halton (Grindstone Creek) and Hamilton Conservation Authority (Spencer Creek) were considered and both authorities participated in the CART process. Water discharged from the proposed quarry will be directed on a regular basis to the Spencer Creek watershed within the Hamilton Conservation Authority jurisdiction as has historically occurred as part of quarry operations, as well as future discharge to the Grindstone Creek within Conservation Halton’s jurisdiction, which is proposed as part of the current application.

5.3 Key Natural Heritage Features on Site

The site contains:

- a Significant Woodland, as identified by the City of Hamilton;
- regionally rare plant species which are characteristic of alvar communities being False Pennyroyal (*Hedeoma hispidum*) and Common Juniper (*Juniperus communis*);
- a locally uncommon bird species, Clay-coloured sparrow (*Spizella pallida*)
- area-sensitive grassland bird species, Grasshopper Sparrow (*Ammodramus savannarum*) and Savannah Sparrow (*Passerculus sandwichensis*);
- a small unevaluated wetland; and,
- potential alvar (a rare vegetation community).

The site is part of the Hayesland Alvar Environmentally Significant Area (ESA) as identified by the City of Hamilton. This ESA was identified because it fulfilled the following ESA Criteria:

- Significant Earth Science Feature
 - o the area encompasses locally significant karst landform features;

- Significant Ecological Function
 - o the area provides habitat for species requiring extensive tracts of open alvar habitat;
 - o the area provides habitat for significant species; and,
 - o the area serves as a link between other natural areas in Flamborough;
- Significant Hydrological Function
 - o the area serves as a sensitive bedrock recharge zone.

The site is also located to the east of the Hayesland Swamp ESA, which is also a Provincially Significant Wetland (PSW).

5.3.1 Alvars

Alvars are natural vegetation communities that develop on shallow soils over bedrock which have characteristic flora and fauna that are able to withstand difficult conditions of periodic drought and flooding.

The definition provided by the Greenbelt Plan (2005) states:

Alvars are naturally open areas of thin or no soil over essentially flat limestone, dolostone or marble rock, supporting a sparse vegetation cover of mostly shrubs and herbs.

The Golder Natural Heritage Report concluded that the “site is an isolated anomaly that should not be considered part of the Hayesland Alvar”, since both the species composition and the anthropogenically-influenced nature of the plant community on the subject lands preclude it from classification as an alvar for either its features or functions. The Golder Natural Heritage Report also noted that “the field studies completed for, and documented in this report include updated plant community mapping and field verification which indicate that the alvar classification and ESA designations should be removed from the site. In response, the Natural Heritage Subcommittee of CART requested a more thorough assessment of the presence of an alvar community on the subject lands and recommended a review of past relevant studies in the area, including “Alvar Management Program: Dundas Quarry – Lafarge Canada Inc.” by A. Goodban Ecological Consulting, December 2000; and “Alvar Vegetation on the Flamborough Plain” Major Thesis Paper, A. Goodban, 1995. Golder provided a response, dated April 2, 2009, which further analyzed the potential alvar community and referred to the relevant studies. Golder’s response noted that the study by A. Goodban Ecological Consulting described a cultural alvar. Golder’s response concluded that the “cultural alvar” gives post-agricultural lands more natural feature significance than is warranted” and that “these areas would be better classified as a complex of ‘cultural thickets’ and ‘cultural meadows’”. However, on January 15, 2010 the Natural Heritage Subcommittee of CART sent a letter to Golder informing:

The Subcommittee understands that alvar must be in excellent condition to be considered Significant Wildlife Habitat under the PPS Technical Manual. However, it is the Subcommittee’s opinion that the alvar is locally significant because it represents the last remnant within Conservation Halton’s watershed.

In response to the Subcommittee’s letter, Golder provided a technical memorandum dated July 2, 2010. Based on this additional information, the Natural Heritage Subcommittee concluded that having reviewed all of the information provided regarding the alvar on the North Quarry Extension lands, the committee was prepared to support Golder’s conclusion that it is a cultural feature and does not represent a true alvar, even though alvar ‘indicator’ species occur there in low numbers.

5.3.2 Streams/Aquatic Resources

Based on a review of all of the information provided, there are no permanent or intermittent watercourses on the site. Intermittent surface water drains to two swales to the south of the site, which drain to a narrow extension of the Hayesland Swamp. Flows into the swamp are diffuse with no defined stream channel. Flows from the swamp then converge with West Grindstone Creek, which was identified as an intermittent stream in the Golder Natural Heritage Report. Downstream, Grindstone Creek is classified as a Type 3 warm water sport fish stream. Fish habitat is found where the swales that drain the Lafarge site join West Grindstone Creek. Appendix “E” provides an overview of the aquatic features on and adjacent to the subject lands.

5.3.3 Vegetation Communities/Ecological Land Classification (ELC)

In 1988, the Ontario Ministry of Natural Resources (MNR) introduced a standard technique for studying and classifying plant communities: Ecological Land Classification (ELC). ELC has become the standard tool for land use planning within natural areas. ELC considers soils, climate, moisture, and plants to provide a standard name for the plant community.

Golder identified plant communities on site using ELC. During the vegetation and botanical surveys, special attention was given to the plants which are characteristic of alvar, as it was known that alvar occurs in the area. Golder’s ELC map is included in Appendix “G”.

CART initially raised concerns about the classification of the remnant alvar as cultural thicket (CUT 2-1). In response to this, Golder indicated that the alvar was classified as cultural thicket because the soils and vegetation in the community were disturbed (had been pasture in the past). Cultural alvar is not a recognized community in ELC. Other species, such as red raspberry (*Rubus idaeus*), hawthorns (*Crataegus* spp.), common buckthorn (*Rhamnus cathartica*), white ash (*Fraxinus americana*), white cedar (*Thuja occidentalis*), and post-

agricultural colonizing forbs, such as Canada goldenrod (*Solidago canadensis*) and New England aster (*Aster novae-anglia*), are not alvar species and indicate past disturbance. Although plants characteristic of alvar have been found on site, such as False Pennyroyal (*Trichostema brachiatum*), Smooth Beard-tongue (*Penstemon digitalis*), and Hairy Beard-tongue (*Penstemon hirsutus*), Golder and the CART Natural Heritage Subcommittee concurred that the alvar was a cultural feature and did not represent a true alvar on the site.

5.3.4 Significant Species

No provincially endangered or threatened species of plants or animals were found on the site during the background and field investigations conducted for this study.

The Golder Natural Heritage Report indicated that two of the plant species recorded during the botanical inventories of the subject lands are considered locally significant in the City of Hamilton. The report states:

False pennyroyal is considered locally “uncommon” in Hamilton and “rare” in the former OMNR Central Region. Common juniper occurs at only two other locations in Hamilton and is considered locally “rare”. These species are present in the cultural thicket community on the site.

The report concludes that neither of the above noted plants are rare in the province, nor do they have special conservation status outside the City of Hamilton.

The study found Clay-coloured Sparrow, which is considered a locally rare species in the City of Hamilton. However, according to the Ontario Breeding Bird Atlas, this species is generally increasing in numbers in rural areas in Ontario and breeding was not confirmed on the Lafarge site. Therefore, the CART Natural Heritage Subcommittee agreed that this species is not likely to be impacted by the proposed expansion.

5.3.5 Wetlands

The Ontario Ministry of Natural Resources (MNR) designates provincially significant wetlands based on an evaluation called the Ontario Wetland Evaluation System (OWES). To the west of the site, the Hayesland-Christie Wetland Complex (also known as the Hayesland Swamp) is a large forested wetland at the boundary of Spencer and Grindstone Creek watersheds. The swamp is a Provincially Significant Wetland (PSW) and an Environmentally Significant Area (ESA) due to its biological diversity, and significant wildlife habitat (a heronry and deer yard).

On the Lafarge site, there is one small unevaluated wetland. This small wetland at the southeast corner of the subject property is classified as Red-Osier Mineral

Thicket Swamp (SWT 2-5) in the ELC completed by Golder. It is possible that this wetland is connected to the Hayesland Swamp Provincially Significant Wetland (PSW) to the east. CART requested that Golder evaluate the wetland according to the MNR’s Southern Ontario Wetland Evaluation System.

Golder did not evaluate this wetland because they noted no visible connection from the wetland pocket to the Hayesland Swamp. Water that does not infiltrate into the wetland pocket either remains, is transpired or evaporates, and the wetland pocket dries out. Golder’s biologists surveyed the small wetland and found no amphibians, no rare plants, and no obligate wetland plants (plants which require wet soil conditions to survive). They concluded that there is no “important” function or feature to justify the evaluation of this small wetland pocket. The Ontario Wetland Evaluation System (OWES) allows small wetlands (less than 2 hectares) to be evaluated if they contribute to an adjacent PSW. It was Golder’s opinion that this small wetland pocket does not contribute any particular ecological benefit to the Hayesland Swamp PSW and should not be included in that wetland complex. For this reason, the small wetland in the southeast corner of the site was not evaluated under the OWES.

However, under the Greenbelt Plan, this small wetland is a Key Hydrologic Feature (KHF) and, if removal is proposed, Lafarge must demonstrate “how (they) could immediately replace any habitat that will be lost from the site with equivalent habitat on another part of the site or on adjacent lands” (Policy 4.3.2.3c ii). To address this, Lafarge has committed to establishing replacement wetlands along extended portions of the shoreline of the lake, including a larger lagoon wetland that will be created after the extraction of the Dundas North Quarry. The details on the location and methods of the wetland creation have been added to the site plans.

An overview of the potential impacts the proposal will have on the water levels of the wetland is found in the Water Resources (Section 6.0) section of this report.

5.3.6 Significant Woodlands and Other Woodlands

As the planning authority, the City of Hamilton has developed a series of criteria for the identification of Significant Woodlands as part of its Rural Hamilton Official Plan in 2006. A woodland is considered significant if at least two or more criteria (i.e., size, interior forest, maturity, rare species, proximity to water, and proximity to other natural areas) are fulfilled. While Significant Woodlands had been identified within the study area, based on Golder Environmental Impact Statement Level 1 and 2 Natural Environment Technical Report and CART site visits, it was concluded that the small woodland areas on the site did not represent Significant Woodland.

The Golder Natural Heritage Report identified the following:

Five small woodland patches are present on site (see figure 4), but the largest is only 2.5 ha. The total area of the woodlands on the site is 6.6 ha

and all of the woodland blocks have relatively open canopies. These five patches are made up of three woodland patches and two conifer plantations are present. Where the woodlands are composed of relatively common and abundant species, including: eastern white cedar, sugar maple, white birch, hop-hornbeam and trembling aspen, as well as planted conifers. The largest forest patch is a relatively young conifer stand of eastern white cedar and eastern hemlock that occupies an area of 2.5 ha in the southwest corner of the subject lands. The next largest woodland patch occupies an area of 2.1 ha and is mixed woods stand dominated by eastern white cedar, sugar maple and white birch, which is separated by the other woodland by about 140m of cultural meadow and shrubland. Although some other smaller forest patches occur on site, no larger contiguous block of woodland is present.

The report concluded that the forested and/or woodland patches recorded on-site do not function collectively as a single woodland and are not large enough as individual patches to be considered significant. CART initially questioned Golder’s conclusions and requested further analysis on the connectivity of the woodland patches and additional justification for not designating them as ‘significant’. Golder provided a response, dated April 2, 2009, which provided additional analysis with specific reference to survey data and provincial and local policies. CART is satisfied with the information submitted and concurs with Golder’s findings.

5.4 Fish and Wildlife

5.4.1 Fish

Based on the information submitted, it is noted that there are no watercourses, either intermittent or permanent, on the site and as a result, there is no fish habitat present. Drainage from the site consists of diffuse surface run-off and most of it collects in a constructed swale south of the site, where it is conveyed to the Hayesland-Christie Wetland Complex. Flow through this swamp forest is diffuse, with no defined channels until it converges with an intermittent tributary of West Grindstone Creek that flows south through the wetland, which is located approximately 300 metres east of the site. There is no permanent, connected fish habitat in the swale system near the site and seasonal fish habitat potential is marginal, due to intermittent flow, lack of instream riparian cover and lack of defined channels downstream.

5.4.2 Wildlife

The Golder Natural Heritage Report outlined that surveys of breeding frogs and birds were conducted on site, as well as an evaluation of wildlife habitat on-site, of corridors and linkages, food sources and habitat use. Background data on

wildlife was also obtained from the MNR’s (NHIC), the Ontario Breeding Bird Atlas, and the Hamilton Natural Heritage Database.

The report concluded that the wildlife on the subject lands is generally characteristic of the rural agricultural landscape of southern Ontario, with elements that are widespread or common across most of the region.

5.5 Conclusion

The natural heritage features and functions on the proposed Lafarge north quarry expansion property were assessed by Golder in a Technical Report. While reviewing the report, a Natural Heritage Subcommittee of CART was formed to address the main issues relating to natural heritage on the site, including:

- a Significant Woodland had been identified by the City of Hamilton;
- a Provincially Significant Wetland and Environmentally Significant Area are located adjacent to the site;
- an alvar community was identified from previous studies; and,
- a small wetland at the southeast corner of the property had not been evaluated under the Ontario Wetland Evaluation System.

Through discussions and site visits with Golder staff, the CART Natural Heritage Subcommittee is now satisfied that these issues have been addressed.

6.0 WATER RESOURCES

6.1 Overview

The subject proposal is referred to as the Proposed North Quarry Extension. As part of the subject application, Lafarge retained Golder to complete a Level 2 Hydrogeology Report in support of the ARA license application. The City of Hamilton retained Dillon Consulting Limited (Dillon) to complete a peer review of hydrogeological and hydrological components, and related aspects of aggregate design and operations of the Proposed North Quarry Extension.

The quarry is located in an elevated limestone plain (Flamborough Plain) above the Niagara Escarpment and is located about 7 km north-northwest of Dundas. The main surface water feature in the vicinity of the proposed extension is the West Branch of Grindstone Creek (West Grindstone Creek). The Hayesland-Christie Wetland Complex (HCWC), a provincially significant wetland, occurs along West Grindstone Creek east of the proposed extension.

As proposed by Lafarge, the proposed extension would proceed in three phases with approximate bench elevations of 241.5 masl, 231.5 masl and 227.0 masl.

Dewatering of the extension would occur via the existing sump in the north quarry.

The primary documents for the water resources assessment are:

Proposed North Quarry Extension, Level 2 Hydrogeology Technical Report, Lafarge Canada Inc., prepared by Golder Ltd., dated July 2007. Referenced later as the Golder Report.

Peer Review, Lafarge Dundas Quarry, Proposed North Quarry Extension, prepared by Dillon Consulting Limited for the City of Hamilton, dated February 6, 2009

Results of the 2010 Pump Test Program in Support of the Lafarge Dundas North Quarry Extension, Dundas, Ontario, completed by Golder Associates Ltd., dated June 30 2010.

6.2 Surface Water

The proposed quarry extension lies within this catchment area to the West Grindstone Creek (which has a drainage area of approximately 26 km²), contributing flow via overland conveyance as well as via a small drainage feature to the southeast of the extension limit. Other surface water features adjacent to the study area include the Hayesland-Christie Wetland Complex (HCWC) located to the east and Spencer Creek located southwest of the existing North Quarry.

Based on the basin characteristics, including the topography of the local terrain, land cover and soils, and monitored data/field observations, this reach of the Grindstone Creek is described as having seasonally variable flows and a quick response to precipitation events. Flow in the West Grindstone Creek is intermittent and there appears to be a connection between presence of flows and water table conditions (i.e., interflow/baseflow discharge area).

6.3 Groundwater

The geology of the area consists of thin overburden over the bedrock plain (overburden thickness increases at the West Grindstone Creek and the Waterdown Moraine located east and south of the proposed extension, respectively). Regionally, the bedrock consists of a 30 to 60 metres thick sequence consisting of the Guelph and Lockport Formations. At the quarry, the two main formations are the Guelph Formation and the Eramosa Formation (the upper unit of the Lockport Formation).

A pumping test was completed in 2006 to provide additional hydrogeological characterization in the extension area and provide data to evaluate potential

impacts resulting from the quarry extension. A bedrock well PW1 was drilled in February 2006 to a depth of 21 m and has an open-borehole intake interval that spans the thickness of the Lower and Upper Eramosa. The well was placed at the edge of the Hayesland-Christie Wetland Complex (HCWC) to investigate groundwater/surface water interaction in the wetland. The pumping test was conducted in well PW1, for four days, from November 6 to 10, 2006 at a constant flow rate of 1,014 m³/day. Water levels were monitored during the pumping and recovery periods by both downhole transducers and manual probes.

Another pumping test was completed April 6-8, 2010. A new pumping well was drilled for this test and was located in the eastern edge of the proposed extension. In addition new observation wells were drilled in the area between the proposed quarry extension and the HCWC.

6.4 Impact Assessment

Surface water aspects of the 2007 assessment were reviewed by Dillon on behalf of the City of Hamilton. After receiving clarification on some aspects of the assessment, Dillon concurred with the general conclusions on the surface water assessment. Some concerns related to groundwater baseflow to the HCWC are discussed below.

Based on the 2006 pumping test plus monitoring data from the existing quarry, it was concluded in the 2007 report that the lateral extent of the zone of influence would be generally be within 500 m. Additionally, the zone of influence would only extend to the edge of the HCWC as the underlying outwash (sands and gravels) deposits function as a recharge boundary. Based on the results of a detailed water budget, it was estimated that quarry dewatering would result in a reduction of water entering the HCWC of 158,195 m³/year, representing 1.5% of the pre-development flows. Six residential wells were identified to be within 500 m of the proposed quarry extension. It was recommended that these wells be included in the North Quarry complaints response program. Overall, it was concluded that significant effects on private water wells were not predicted and that there are several means of mitigation if impacts are detected in the complaints response program, which has been in place since 1996 and was approved by the Ministry of the Environment (MOE). The program includes the following components:

- Once a complaint is received, a representative of Lafarge visits the site to make an assessment. This includes an examination of the well to determine the water level and pump depth setting.
- If the water supply has been interrupted, a temporary supply is immediately arranged.

- In the event that the problem can be corrected by lowering the pump, this will be done immediately.
- If there is the potential to deepen the existing well, that option could be followed.
- Where sufficient water is not encountered, relocating the well on the property would be considered.

All complaints are then documented in the annual Permit to Take Water reports that are submitted to the MOE.

The quarry extension is located at a considerable distance from the Greensville municipal well system capture area and there will not be any interference resulting from the quarry extension on the Greensville municipal well system.

In the detailed analysis of the report completed by Dillon on behalf of the City of Hamilton, there was agreement that, based on both the Golder interpretation and Dillon assessment of the available data, impacts caused from the proposed extension on private water wells would not significantly increase over that predicted with the full excavation of the currently approved North Quarry and that monitoring and mitigation measures currently in place at the North Quarry are adequate.

The interpretation of the 2006 pumping test and the water balance based, in part, on the pumping test results was reviewed by Dillon. Concerns were identified on the proportioning of flow from the overburden system at the pumping well location (located east of the extension site at the HCWC) and the bedrock groundwater system. Based on these concerns, an additional pumping test was completed in April 2010 on a new pumping well located at the eastern extent of the proposed quarry extension with additional observation wells installed between the proposed extension and the HCWC. Existing observation wells were also monitored during the 2010 pumping test. Based on the 2010 pumping test data, the water balance was reevaluated and it was concluded that quarry dewatering would result in a reduction of water entering the HCWC of 454,900 to 481,300 m³/year once the second bench is extracted (i.e., full excavation of the quarry extension), representing a reduction of approximately 5.0% to 5.3% of the pre-development flows. A mitigation plan was proposed where water collected in the dewatering operation for the quarry would be directed back to the HCWC to compensate for the reduction of water from pre-development conditions. Dillon reviewed the results of the 2010 assessment and concurred with its conclusions.

6.5 Monitoring and Mitigation

The monitoring and mitigation plans for the quarry extension are summarized in Section 5 and Section 6 of the 2010 Golder Report. As detailed above, the

proponent proposes to direct part of the water collected in the quarry dewatering process back to the HCWC to compensate for the 5.7% to 6.0% estimated reduction of the pre-development flows to the HCWC. It is proposed that discharge to the HCWC take place between October and May so that the intermittent nature of the surface water within the HCWC at this location be maintained. It is proposed that during the first bench extraction that a range of 19,800 to 99,000 m³/year be discharged to this location. Once second bench extraction commences within the proposed extension, the flow rate is to be increased to a range of 454,900 to 481,300 m³/year to reflect the increase in anticipated groundwater seepage into the quarry extension.

The monitoring program includes the collection of water level measurements for monitoring wells, mini-piezometers and surface water stations in the vicinity of the proposed extension. Monitoring at the HCWC is on-going and there is almost a 4-year record of water levels in and adjacent to the wetland and, as such, baseline conditions in the wetland are established.

The monitoring results are to be provided to the Ministry of Natural Resources and the Ministry of the Environment in an annual report along with the discharge records. The annual report will summarize the results of the monitoring program and will identify changes from the established baseline conditions. In the unanticipated event that there is an impact to the HCWC, the annual report will include recommended mitigation measures beyond those which are described below. A key monitoring location is SG1 which is the surface water gauge located in the HCWC approximately 500 m east of the proposed extension boundary. Monitoring data from SG1 will provide an indication of whether the proposed amount of discharge to the HCWC is sufficient to maintain surface water levels (target of 0.2 m) in the HCWC from October to May. Should standing water not be maintained in the wetland from October to May at SG1, then additional water (i.e., flow rates greater than those currently planned as part of mitigation) is to be directed to the HCWC.

Conservation Halton has requested that Lafarge install dual monitoring locations within the wetland in the vicinity of SG1 and the proposed discharge location to ensure that the water levels at SG1 correlate to water levels in the vicinity of the proposed point of flow contribution. Lafarge has agreed to this requirement.

The standing water level at SG1 will be achieved through the direct discharge from first bench dewatering of a minimum 19,800 m³/year and would be increased as needed until the 0.2 m of standing water is achieved at SG-1, at an average of 2,475 m³/month over the 8-month period (October to May). Once second bench extraction is initiated for the quarry extension, the minimum discharge would be increased to 454,900 m³/year (an average of 56,860 m³/month) and would also be increased should the 0.2 m standing water level at SG1 not be achieved between October and May of each year. In the Dillon review of the monitoring and mitigation plan, it was cautioned that the amount of water returned to the HCWC is based on calculated seepage rates and

readjustments to the flow rate may be required based on water level monitoring in the HCWC. CART concurs with this recommendation.

Conservation Halton staff noted that this flow is intended to offset groundwater losses only and the 69,000 m³/yr of surface runoff is not being proposed to be redirected back to Grindstone Creek. To this end, Conservation Halton staff requested that Lafarge consider supplying a minimum of 69,000 m³ plus any additional flow that may be required to maintain the wetland. Lafarge has agreed to this requirement.

The Annual Report is to include a definitive conclusion regarding the adequacy of the mitigation program, and whether the base augmentation flow rate (which is based on calculated seepage rates) should be increased or decreased. In addition, the Annual Report should review groundwater levels in the June through September period and, if water levels decrease beyond the established baseline for this period, provide a mitigation plan to increase groundwater water levels (e.g., by providing some flow augmentation during the June to September period).

In addition to the water level monitoring there is also an ecological monitoring program for the HCWC, which consists of transect monitoring at two locations in the HCWC directly east of the site in close proximity to the surface and groundwater monitoring stations.

Monitoring and mitigation are to continue during the rehabilitation phase after the quarry extension is full developed and water levels are allowed to increase within the quarry. Since it is estimated that it will take considerable time for the quarry to fill with water, flow augmentation to the HCWC will be continue. As the lake level in the former quarry increases with time, the groundwater seepage rate to the quarry will decrease which will result in a decrease in the flow rate that will be required to maintain water levels within the HCWC (i.e., maintaining 0.2m of surface water at SG1 during October to May period).

6.6 Agreement for Long Term Management of Monitoring and Mitigation

Conservation Halton staff have also recommended that approval be subject to Lafarge entering into an agreement with a public agency, such as Conservation Halton, to ensure implementation of the monitoring and mitigation plans during the rehabilitation stage. The main principle of the agreement would be that the costs associated with the long term pumping required to implement the proposed monitoring and mitigation plans would be borne by Lafarge to ensure that there is no long term financial liability to the public.

7.0 ARCHAEOLOGY

The report Archaeological Assessment (Stages 1-2) North Quarry Extension, Part of Lots 9&10, Concession 4 West, City of Hamilton, Ontario (Former Geo. Twp. Of Flamborough), prepared by Archaeologix Inc. and dated May 2007, was submitted with the Lafarge Dundas North Quarry Extension ARA License application.

The Archaeological Assessment included Stage 1 Background Research, which included a review of the land use history, including pertinent historic maps, and an examination of the National Site Registration Database to determine if any known archaeological sites were present on the subject lands. The Background Research indicated that the subject lands are located within the “Flamborough Plain”, an area of poor soil development. There are no registered archaeological resources located within two kilometers of the subject lands, and the research did not identify any recorded historic sites on the subject lands.

The Stage 2 Field Assessment was conducted during the early fall using the standard shovel test pit method at a five metre interval. Areas on the subject property with exposed bedrock and poor drainage were deemed to have low archaeological potential and were not tested. Each test pit was excavated to subsoil and was approximately 30 centimetres in diameter. The Stage 2 Field Assessment did not result in the identification of any significant archaeological material or sites, and the study authors recommended no further archaeological interest in the subject property.

The Archaeological Assessment was submitted to the Ministry of Culture for review and the Provincial interest in archaeology was signed off by the Ministry on September 9, 2009. The correspondence from the Ministry states that the Ministry accepts the report, for licensing purposes, and the licensed archaeologists recommendation that there are no further concerns with respect to archaeology for the subject lands.

It is observed that the Notes on the Operational Site Plan submitted with the ARA license application include the standard clause requiring that the Ministry of Culture be notified should any deeply buried archaeological material be found during extraction, and further that all relevant agencies be contacted should human remains be encountered during extraction.

8.0 NOISE

An Assessment of the Potential Noise from Aggregate Extraction & Processing at the Proposed North Quarry Extension (May 2007) was submitted by Aercoustics Engineering Limited on behalf of Lafarge with the ARA License application. The study examined the potential noise impacts from the proposed North Quarry

Extension for compliance with Ministry of Environment (MOE) noise guidelines, and provided recommendations to be included in the ARA Site Plans to ensure compliance, should the quarry be approved.

The study identifies that the lands surrounding the proposed quarry are zoned for agricultural use, and identifies five representative residential receptors (R1 to R5) in the vicinity of the subject lands. Three of the receptors (R1, R2, and R5) are dwellings to the north of the proposed quarry along 5th Concession West, and two of the receptors (R3 and R4) are located south of the quarry along 4th Concession West, as illustrated on Appendix “H”.

The study establishes the applicable sound level limits as those defined by MOE Publication NPC-205 (Sound Level Limits for Stationary Sources in Class 1 & 2 Areas (Urban)). For all receptors, the background sound levels are defined by man-made sources during the daytime and by natural sounds in the evening and nighttime. These characteristics define the area as being a Class 2 area as per MOE guidelines. NPC-205 states that the applicable sound level limits for a Class 2 Area are 50 dBA during the daytime and 45 dBA during the nighttime, or the existing ambient sound level, whichever is greater. Due to the low ambient sound level in the area, the MOE limits of 50 dBA daytime and 45 dBA nighttime are applicable in this situation.

The study provides an overview of the proposed site operations, which consist of site preparation, extraction and processing, and site rehabilitation. Site preparation includes berm and screen construction, using bulldozers, scrapers, loaders and excavators. Extraction will take place in benches using either one or two rock drills. Rock will be crushed in the primary crushing plant located in the existing Dundas South Quarry, but portable crushing and screening may take place within the subject lands.

Worst case scenarios are established for each of the receptors with different types of equipment in operation and at different times of the day and night. For each scenario, noise levels are predicted. The predictions assume incorporation of recommended noise control measures. The study finds that for all receptors, the predicted worst case scenario noise levels are within the MOE sound level limits, assuming that noise control measures are in place.

The study provides a detailed overview of the required noise control measures. With regard to construction and rehabilitation, the study notes that construction noise is not limited by the MOE as it is considered to be temporary and unavoidable. However, the study recommends that property line berms should be constructed as soon as possible during site preparation so as to provide some shielding to the surrounding residences.

With regard to noise control measures related to extraction and processing, the study provides general recommendations, and also recommendations specific to two possible drilling scenarios. The first scenario involves the use of a quiet drill,

while the second scenario involves the use of a typical contracted drill. It is not known at this point which drilling scenario Lafarge will use, and therefore noise control measures have been provided for each of the two scenarios. The noise control measures include the following: sound level limits for equipment operating in the North Quarry Extension; drilling and processing operations using portable equipment are restricted to daytime hours; direction of extraction is indicated (south to north); berming is required along the north and a portion of the east quarry limit (different heights depending on which drilling scenario is used); prohibition of the use of certain equipment at different times and locations for each scenario; and shielding of the portable processing plant by a continuous barrier of stockpiles or equivalent. The noise control measures are included on the ARA Site Plan to ensure compliance.

The Aercoustics study was peer reviewed by Jade Acoustics on behalf of CART. In general, the peer review agreed with the recommended noise mitigation measures of the noise study. The peer review did raise some questions requiring clarification regarding receptor heights and monitoring of the existing operations, and also requested additional information regarding the final stage of extraction, and a minor exceedance of the MOE sound level limits for two of the sound measurement scenarios.

Aercoustics responded to the peer review and provided the requested clarification and information. On a review of Aercoustics’ response, the peer reviewer (Jade Acoustics) stated that they are satisfied with the response, but that one outstanding concern remains. The concern regards receptor heights. The Aercoustics study predicted sound levels at a receptor height of 1.5 metres for daytime and 4.5 metres for nighttime. The MOE publication NPC-205 does not dictate receptor height, but instead states that a receptor may be anywhere on the premises. As such, it is the opinion of the peer reviewer that receptor heights of 1.5 metres and 4.5 metres should be analyzed for both daytime and nighttime. Aercoustics disagrees with this conclusion, and states that measuring 1.5 metres in the daytime and 4.5 meters nighttime is the industry standard approach. Upon further review the peer reviewer indicates that in this site specific case the analysis conducted by Aercoustics can be accepted because the analysis conducted is reasonably conservative and the difference in the attenuated sound level between the 1.5m high receptor and the 4.5m high receptor is 0.4 dBA to 1.3 dBa. Additionally, the peer reviewer has recommended that monitoring of the Lafarge Quarry operations should be conducted at both receptor heights for day and evening/night. Lafarge has a complaint protocol in effect for the North Quarry, where an investigation is conducted for any complaints received. This existing complaints protocol will be an effective means of identifying and responding to any noise issues.

9.0 AIR QUALITY

Following requests from CART that an air quality study should be provided for the quarry extension application, Lafarge submitted an [Air Quality Study, Dundas](#)

North Quarry Expansion, Dundas, Ontario, prepared by Pottinger Gaherty Environmental Consultants, and dated November 2008. This study was not submitted as part of the ARA License application. Rather, it was submitted separately in support of the planning applications in November, 2008.

The study provides an air quality impact assessment which predicts off-site maximum ground level concentrations of significant air contaminants in the vicinity of the proposed North quarry extension. The study defines significant air contaminants to be particulate matter (including Total Suspended Particulate (TSP) and Fine Particulate Matter (PM₁₀ and PM_{2.5})) and combustion gases (including nitrogen oxides, sulphur dioxide and carbon monoxide).

The study defines three maximum emission scenarios which represent the quarry operations over the lifetime of the quarry. The scenarios are: Site Preparation/Rehabilitation; Extraction in the East Direction; and Extraction in the North/Northeast Direction. Emission sources are identified for each scenario, and for each scenario, emissions of each contaminant from each source are estimated using emission estimating techniques that are consistent with Ontario MOE Guidance documents. The estimated emissions of each contaminant plus existing background concentrations are compared to the applicable standards to determine if any exceedances exist.

The Air Quality Study finds that there will be no significant off-site exceedances of any of the measured contaminants as a result of operations in the North Quarry Extension, for any of the measured scenarios. Some marginal exceedances were predicted for certain contaminants. However, due to the conservative nature of the study, including conservative background concentrations, and the fact that the exceedances occurred in areas at the property line which are agricultural and have limited access, no health or visibility impacts are predicted from any of the minor exceedances. These conclusions are contingent upon implementation of a Best Management Practices Plan in the North Quarry Extension, as discussed below.

The Study recommends that Lafarge implements a Best Management Practices (BMP) Plan for Fugitive Dust Emissions for the North Quarry Extension. The proposed BMP Plan is an update to the existing BMP Plan for the North Quarry, which has been revised and updated to include the proposed Extension. The BMP Plan indicates measures that must be taken to reduce fugitive dust emissions resulting from on-site traffic movements, unpaved roads, stockpiles, material transfer, and portable crushing and screening. The BMP Plan also includes implementation and monitoring procedures for the Plan, and includes requirements for staff training, record keeping, and posting of the Plan on site.

The Air Quality Study was peer reviewed by Church & Trought Inc. The peer review was in agreement with the findings of the PGL Air Quality Study. The peer review included suggestions for some minor revisions to improve the BMP Plan. In addition, regarding the minor exceedances of some of the contaminant

levels at some receptors, Church & Trought confirms that the PGL study used a very conservative approach, even more conservative than that normally taken by the MOE. Therefore, the minor exceedances are not of concern. PGL responded to the peer review and accepted the minor changes to the BMP Plan.

Staff from the City of Hamilton Public Health Services have also reviewed the Air Quality Study and peer review. Public Health supports all recommendations within the BMP Plan. In addition, Public Health has recommended that periodic air sampling of emissions from the North Quarry should occur to ensure that contaminants do not exceed standards at neighbouring residences.

In order to ensure implementation of the BMP Plan, and the air sampling requested by Public Health, CART recommended that notes be included on the ARA Site Plan which would require compliance with the above. The ARA Site Plan (see Appendix “D”) has been revised to include these notes.

10.0 BLASTING

The report entitled “Proposed North Quarry Extension Blasting Impact Assessment” by Golder, dated May, 2007 was submitted with Lafarge’s ARA license application. Proposed blasting operations in the North Quarry Extension will be similar to those already in place at the existing North Quarry. Blasting will take place in two benches varying in height from 15 to 22 metres.

All blasting operations at the North Quarry are monitored for ground and air vibration effects. Ground and air vibration effects produced at private structures as a result of blasting are subject to guidelines contained in MOE publication NPC 119 (Model Municipal Noise Control By-law). Where monitoring of blasting operations is routinely carried out, the ground and air vibration limits at the nearest structure are 12.5 mm/s and 128 dBL respectively. For the Blasting Impact Assessment, Golder monitored ground and air vibration levels during several typical blasts in the North Quarry, and also monitored results at the permanent monitoring stations around the quarry property. The monitoring allowed Golder to establish site specific ground and air vibration characteristics, which in turn allowed for prediction of impacts from blasting on nearby sensitive receptors.

The results of the monitoring indicate that the two critical parameters in controlling ground and air vibration effects are distance from the blast and amount of explosive detonated per delay period. Based on the monitoring data, Golder concludes that provincial guidelines (NPC 119) will be complied with, and the maximum standards for ground and air vibration levels of 12.5 mm/s and 128 dBL will not be exceeded, for all blasting beyond a distance of 225 metres from adjacent residential properties. This represents a majority of the proposed extension. When blasting is closer than 225 metres to a sensitive receptor, it will become necessary to reduce the maximum explosive weight detonated per blast,

depending on the bench height. Golder outlines how this can be achieved, including methods such as reducing borehole diameter or borehole depth.

The Golder study further concludes that there will be no noticeable effect on adjacent structures or nearby wells as a result of blasting in the North Quarry as long as blasting continues to occur within the NPC 119 limits for ground and air vibration effects. In addition, with regards to the Sun-Canadian Pipeline to the north of proposed quarry extension, Golder concludes that routine blasting procedures currently used in the North Quarry can be utilized until blasting approaches to within 100 metres of the pipeline, at which time blasting practices may change to ensure compliance with Sun-Canadian guidelines.

The Blasting Impact Assessment was peer reviewed by Explotech. The peer review was generally in agreement with the conclusions of the Golder study. However, the peer review did raise some points that required clarification or additional information, including the following: the need for recent monitoring data from the existing monitoring wells to be included in the report and a reference to whether or not the data from the existing wells meets the NPC 119 standards; clarification regarding explosive weight per delay period; a minor calculation error; and a suggestion for monitoring within 95 metres of the pipeline.

Golder has responded to the Explotech review and provided the necessary clarification and addressed the calculation error. Golder has also stated that they are recommending monitoring of blasting within 150 metres of the pipeline (which is more stringent than the Explotech suggestion). It is noted that the Notes on the Operational Site Plan (See Appendix “D”) include a requirement for monitoring within 60 metres of the pipeline, and that this must be updated to reflect the Golder recommendation of monitoring within 150 metres of the pipeline.

Golder’s response also included the results from the four permanent monitoring wells as requested by Explotech. The results indicate a very minor exceedance of the NPC 119 standards for ground and air vibration at one of the wells. However, Explotech’s response to this data states that there is conservatism built into the guideline limits to allow for such minor deviations with a negligible increase in damage potential. Explotech also notes that the exceedances appear to be anomalous events, however “despite the lack of damage potential, the quarry may be subject to punitive action by the applicable regulatory bodies in cases of such exceedances”.

11.0 TRAFFIC/HAUL ROUTE

The proponent indicates that the transportation system currently in place for the existing quarry will remain the same. The existing entrance/exit is onto Highway 5, a Provincial Highway that links to Highway 6, Highway 8, Highway 403 and Highway 401. The proponent indicates that there is no anticipated change in

truck traffic volumes. The Ministry of Transportation has been circulated this application and provided no comment. The existing access is proposed to be used as the quarry uses a 3.2 km conveyor belt system to transport any rock extracted to the existing processing plant south of Highway 5. The City’s Public Works Department has no objections to Lafarge proposing to use the same haul route.

12.0 REHABILITATION

The North Quarry Extension is proposed to be rehabilitated to a lake with shoreline, wetlands and vegetated side slopes. The quarry will be backfilled with a minimum 2:1 side slopes to create shoreline wetlands and aquatic habitat. Within the shoreline areas organic material, topsoil substrates and cover material will be placed to enhance aquatic habitat. The design will provide amphibian breeding, potential fish spawning areas and cover for fish and other aquatic organisms. In addition a minimum of 35% of the shoreline area above the final water elevation will be forested with native early succesional tree species including white pine, trembling aspen and eastern white cedar. This landform is well-suited for conservation, tourism, recreation and educational purposes and is compatible with the objectives and vision for the rural area.

12.1 Integration with North Quarry

A site plan amendment has been filed with the Ministry of Natural Resources to amend the North Quarry site plans to allow the two sites to be integrated. The site plan amendment includes a proposal to reduce the 15m extraction setback to 0 m where the North Quarry shares a property boundary with the North Quarry Extension. The application also includes a revision to amend the final rehabilitated landform in the North Quarry from a dry landform to a lake consistent with the proposed landform for the North Quarry Extension.

13.0 CONCLUSIONS

Throughout the CART process, the members of CART have evaluated Lafarge’s proposal against the relevant legislation, policies and mandates applicable to the subject proposal. This report is a summary of the technical evaluation conducted by CART. However, the separate review agencies will retain the right and ability to report independently with individual recommendations on the proposal to their governing bodies and utilize this report for referencing purposes.

The subject proposal will be presented to the appropriate governing body under a separate report by the individual agencies.

APPENDICIES

APPENDIX "A" – LOCATION MAP

APPENDIX "B" – ZONING MAP

APPENDIX "C" – SURROUNDING LAND USES

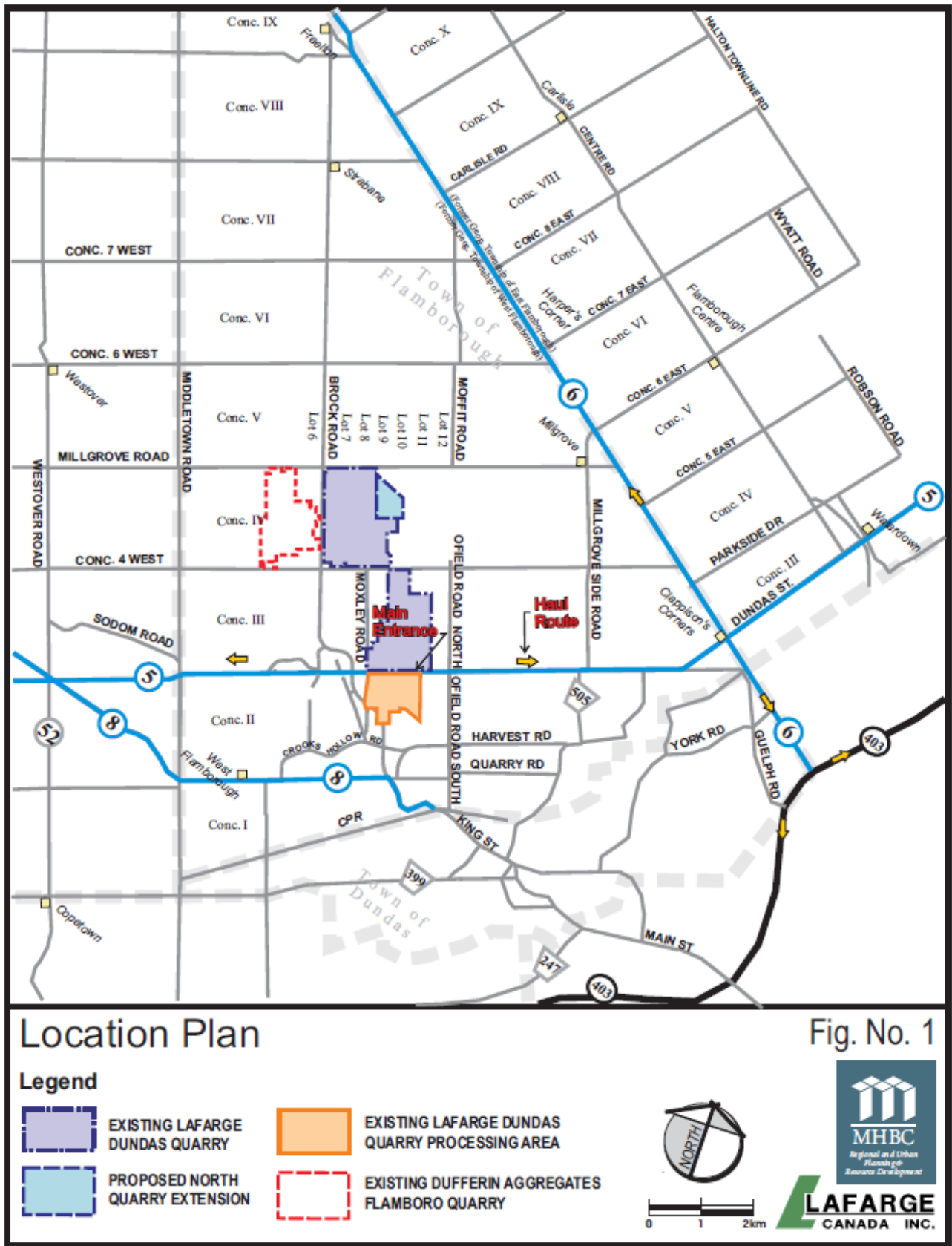
APPENDIX "D" – ARA SITE PLANS

APPENDIX "E" – AQUATIC FEATURES MAP

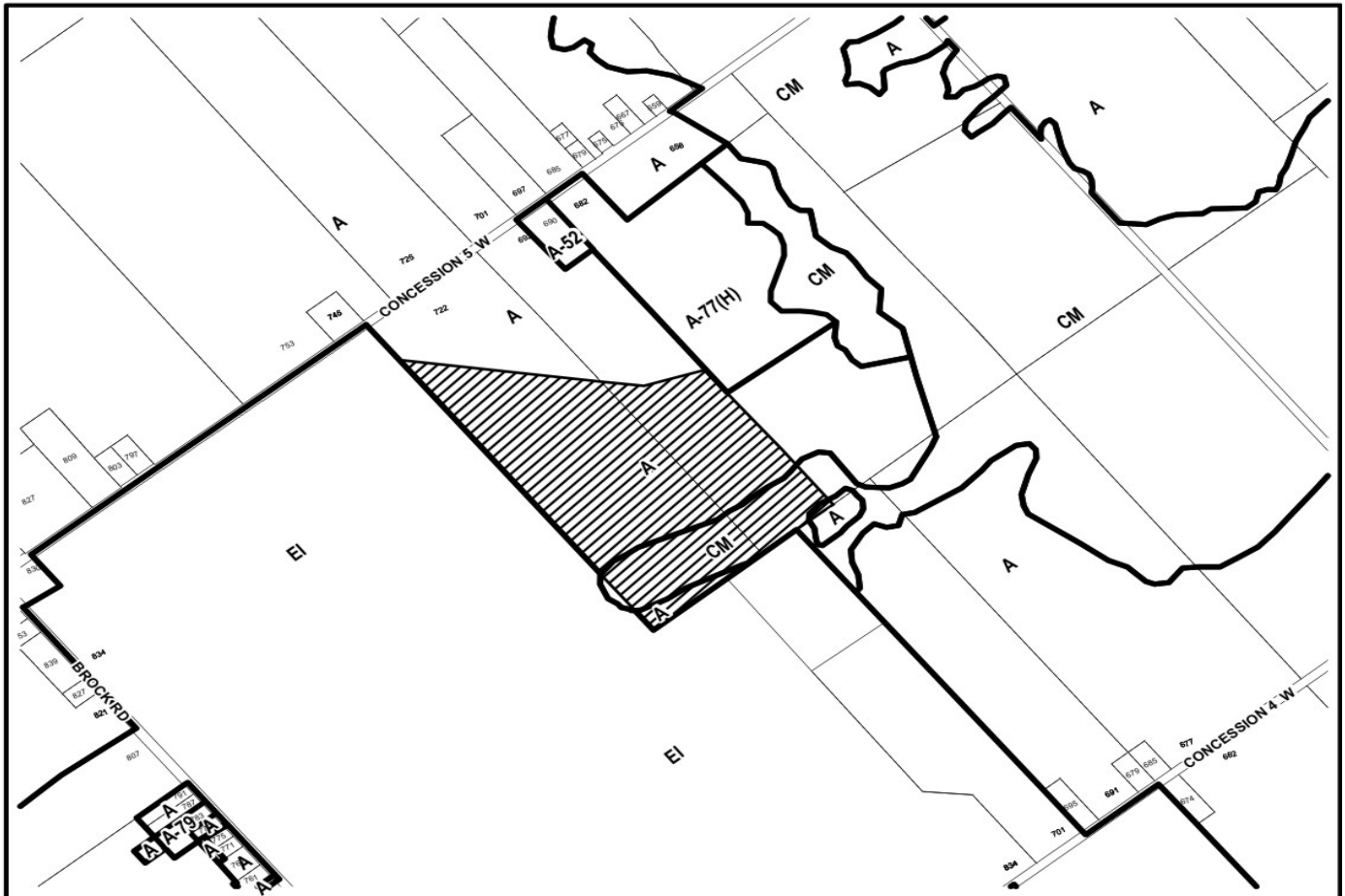
APPENDIX "G" – REGIONAL BEDROCK GEOLOGY AND ELEVATION

APPENDIX "G" – ELC MAP

APPENDIX "H" – NOISE

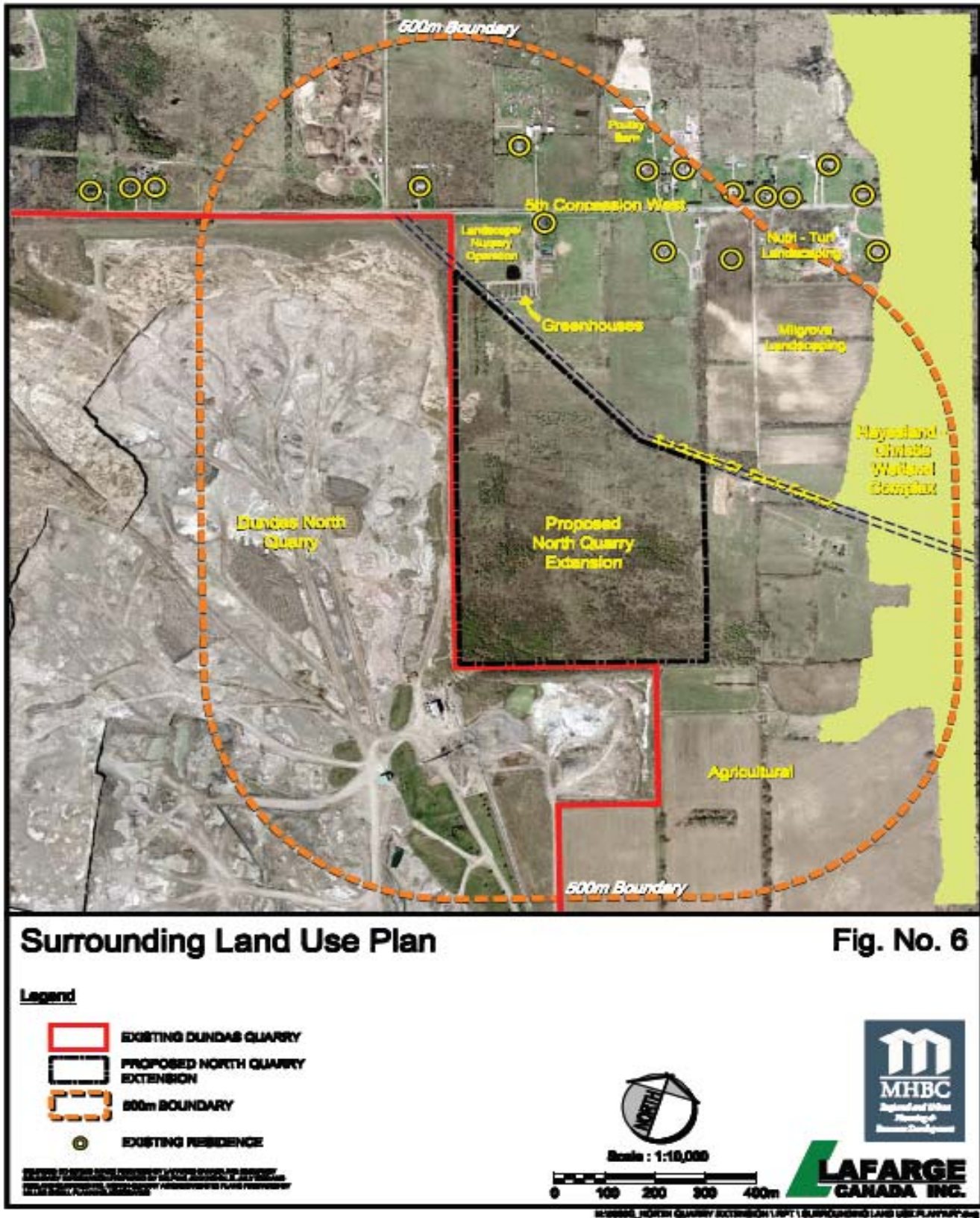


Appendix "A" (Location Map) to CART Report (Page 1 of 1)

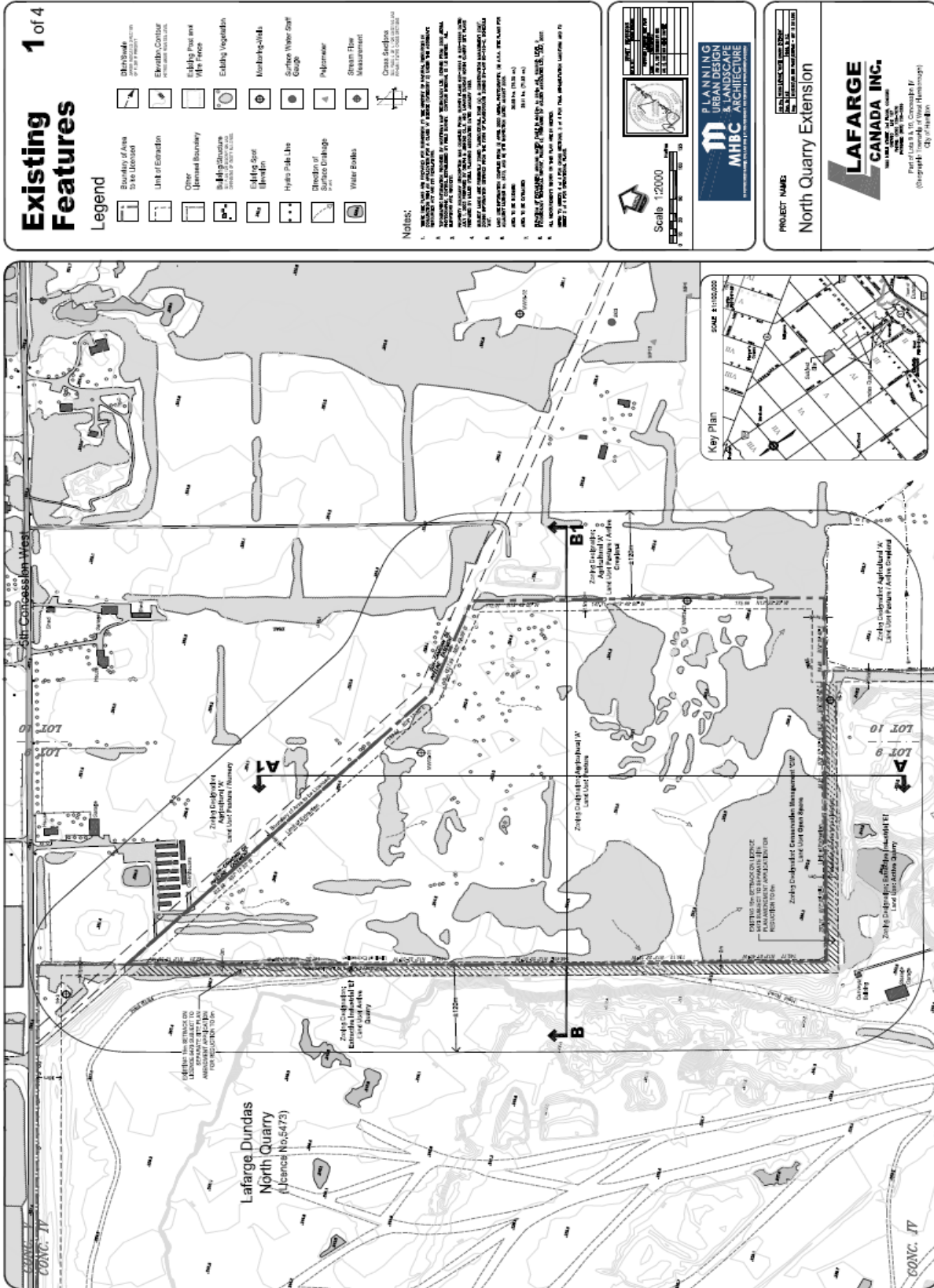


<p>● Site of the Application</p> <p style="text-align: center;">Ward 14 Key Map N.T.S. </p>	<div style="text-align: center;"> <h2 style="margin: 0;">Location Map</h2> </div> <p style="text-align: center; font-size: small;">PLANNING AND ECONOMIC DEVELOPMENT DEPARTMENT</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 50%; font-size: x-small;"> File Name/Number: OPA-07-15 / ZAC-07-054 </td> <td style="width: 50%; font-size: x-small;"> Date: August 16, 2007 </td> </tr> <tr> <td style="font-size: x-small;"> Appendix "A" </td> <td style="font-size: x-small;"> Scale: N.T.S. </td> </tr> <tr> <td colspan="2" style="font-size: x-small;"> Planner/Technician: SH/MC </td> </tr> </table> <p>Subject Property</p> <p> 692 and 722 Concession 5 West</p>	File Name/Number: OPA-07-15 / ZAC-07-054	Date: August 16, 2007	Appendix "A"	Scale: N.T.S.	Planner/Technician: SH/MC	
File Name/Number: OPA-07-15 / ZAC-07-054	Date: August 16, 2007						
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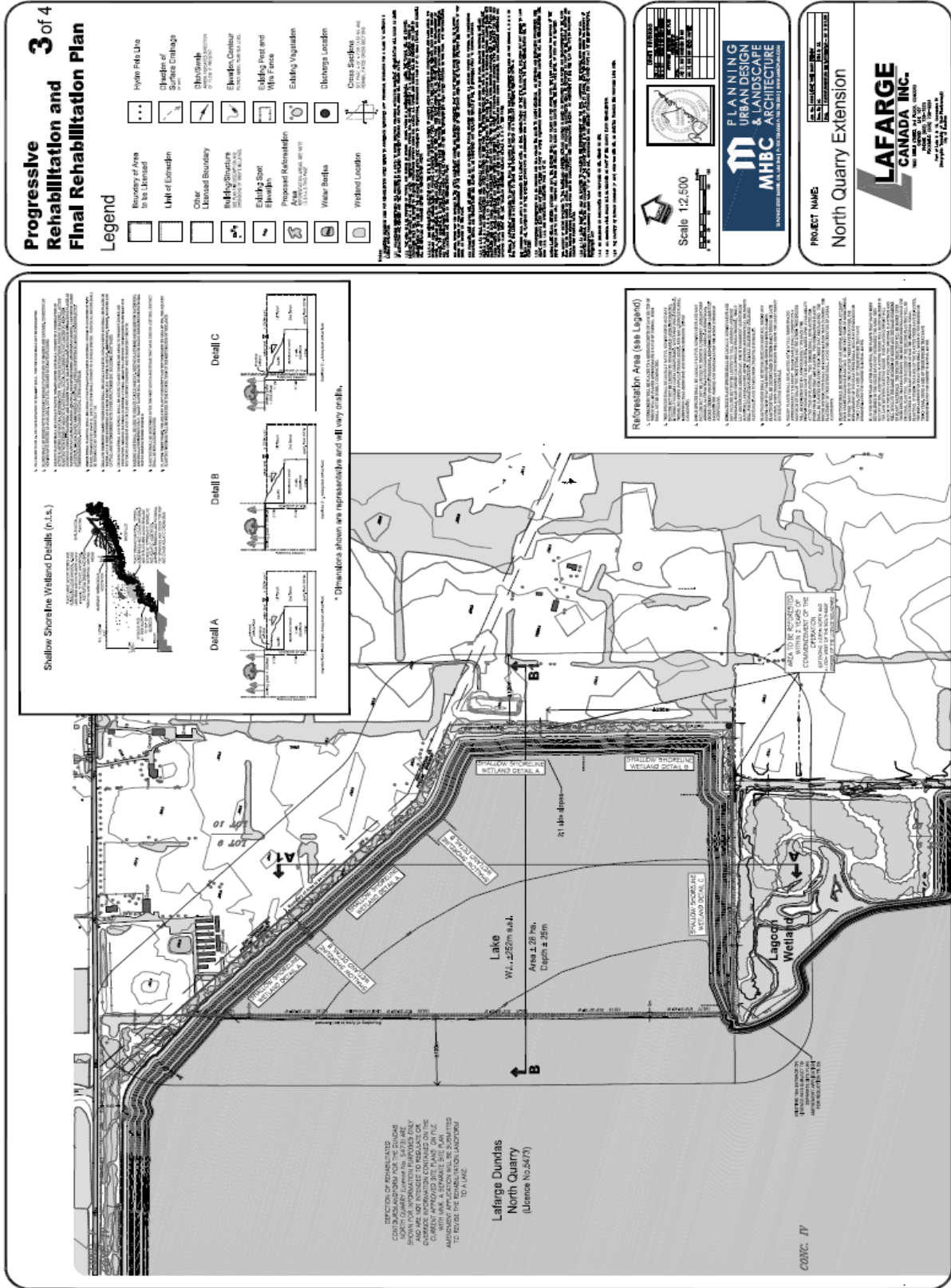
Appendix "B" (Zoning Map) to CART Report (Page 1 of 1)



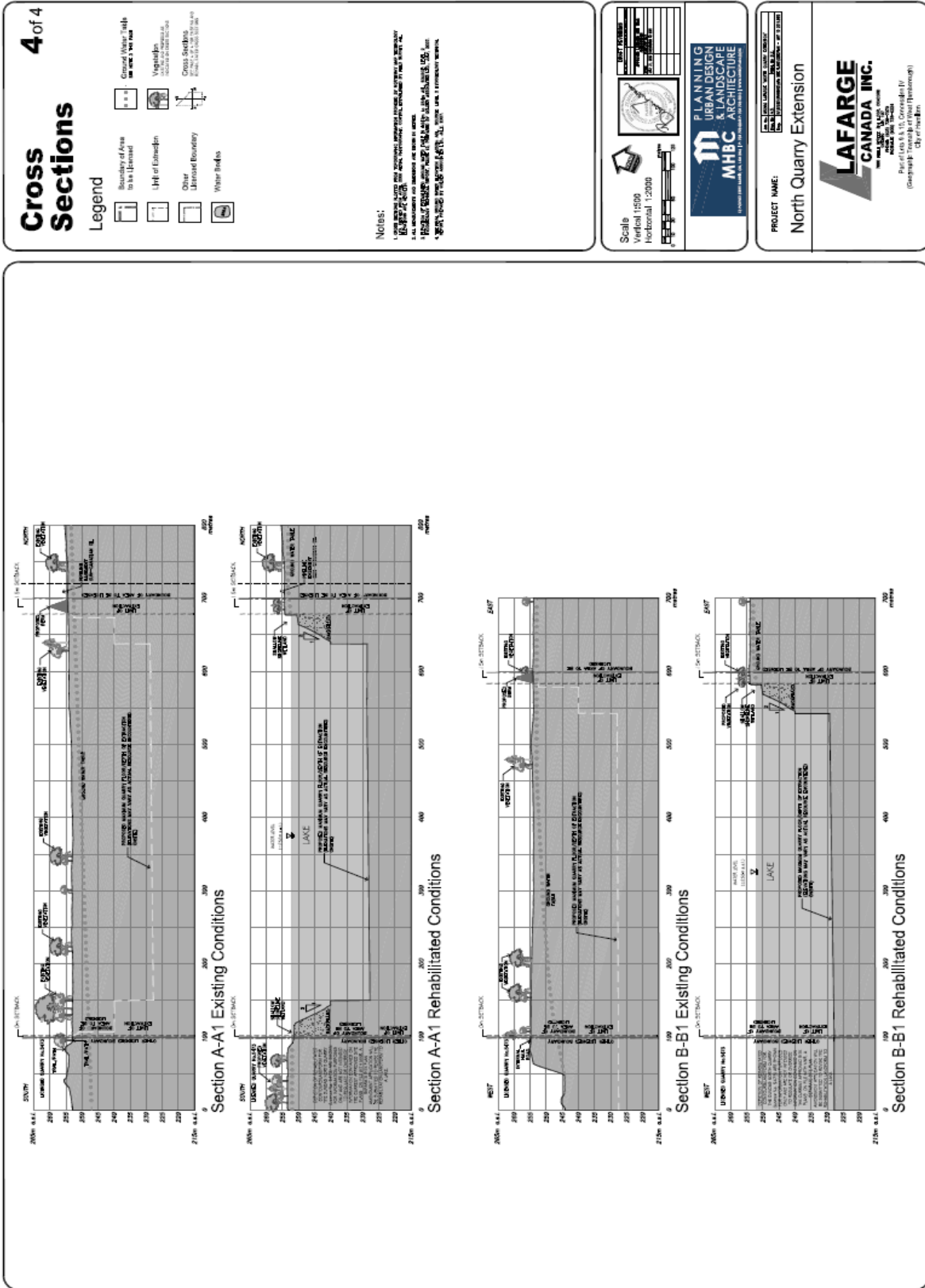
Appendix "C" (Surrounding Land Uses to CART Report (Page 1 of 1))



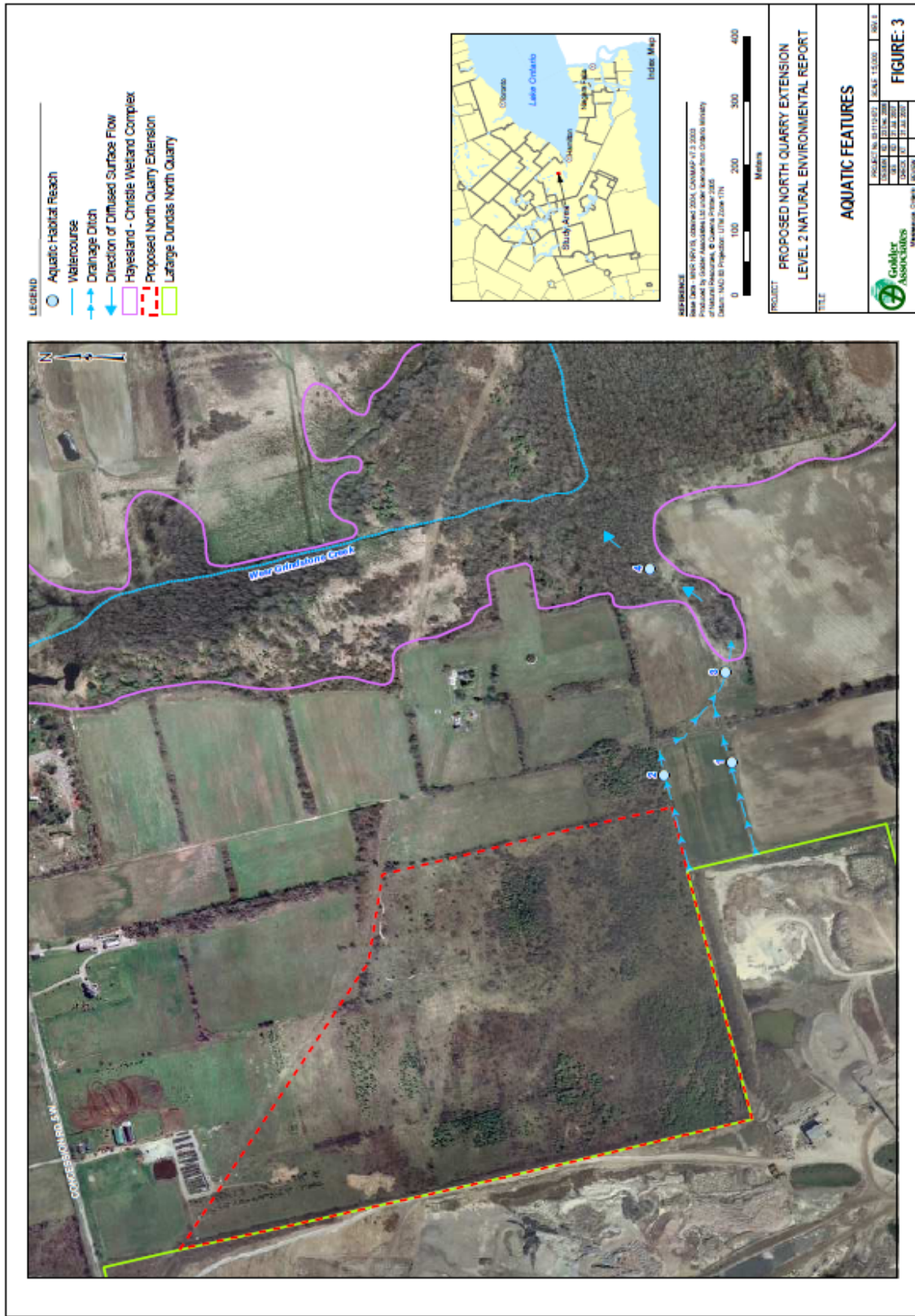
Appendix "D" (ARA Site Plan) to CART Report (Page 1 of 4)



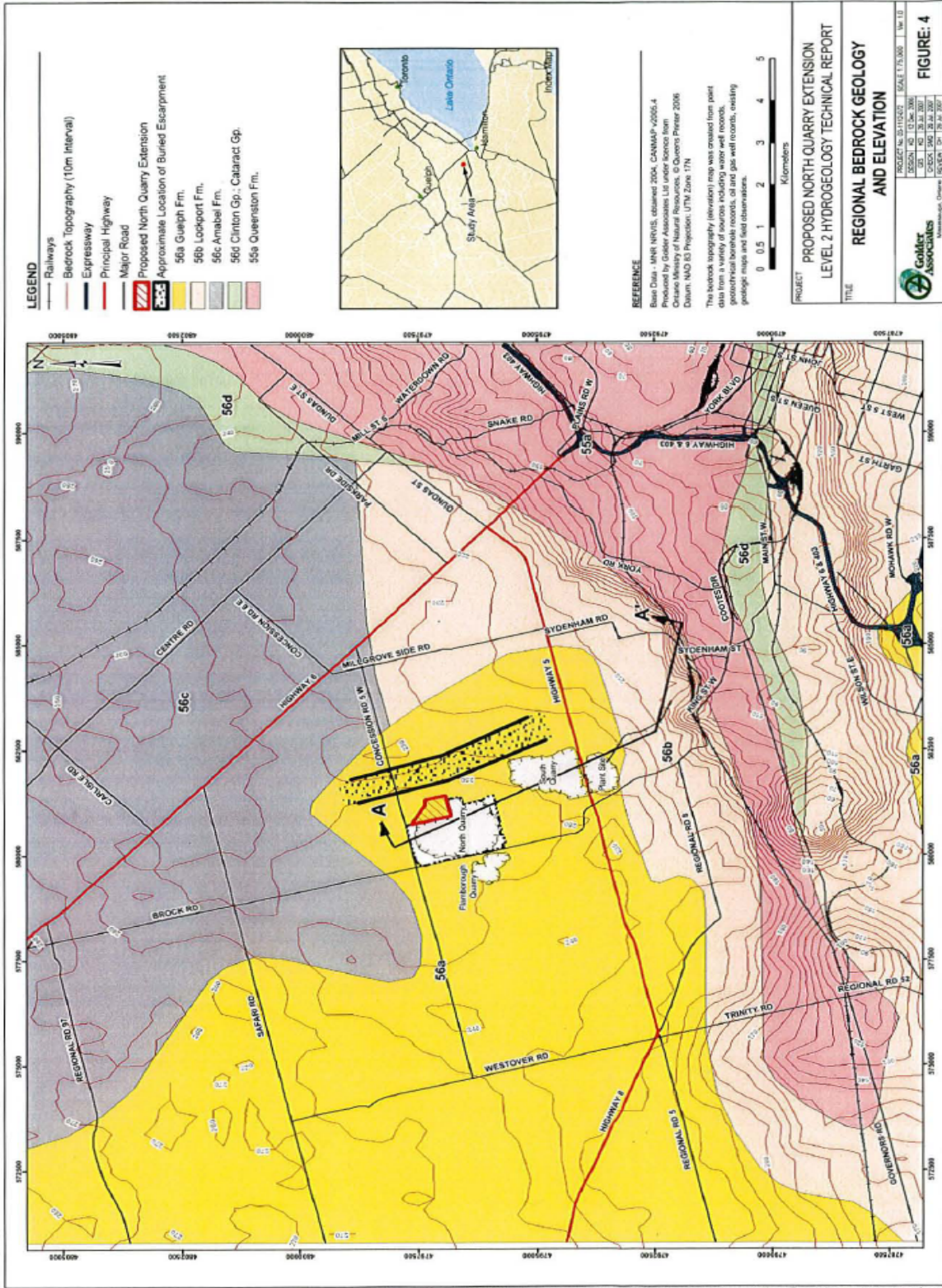
Appendix "D" (ARA Site Plan) to CART Report (Page 3 of 4)



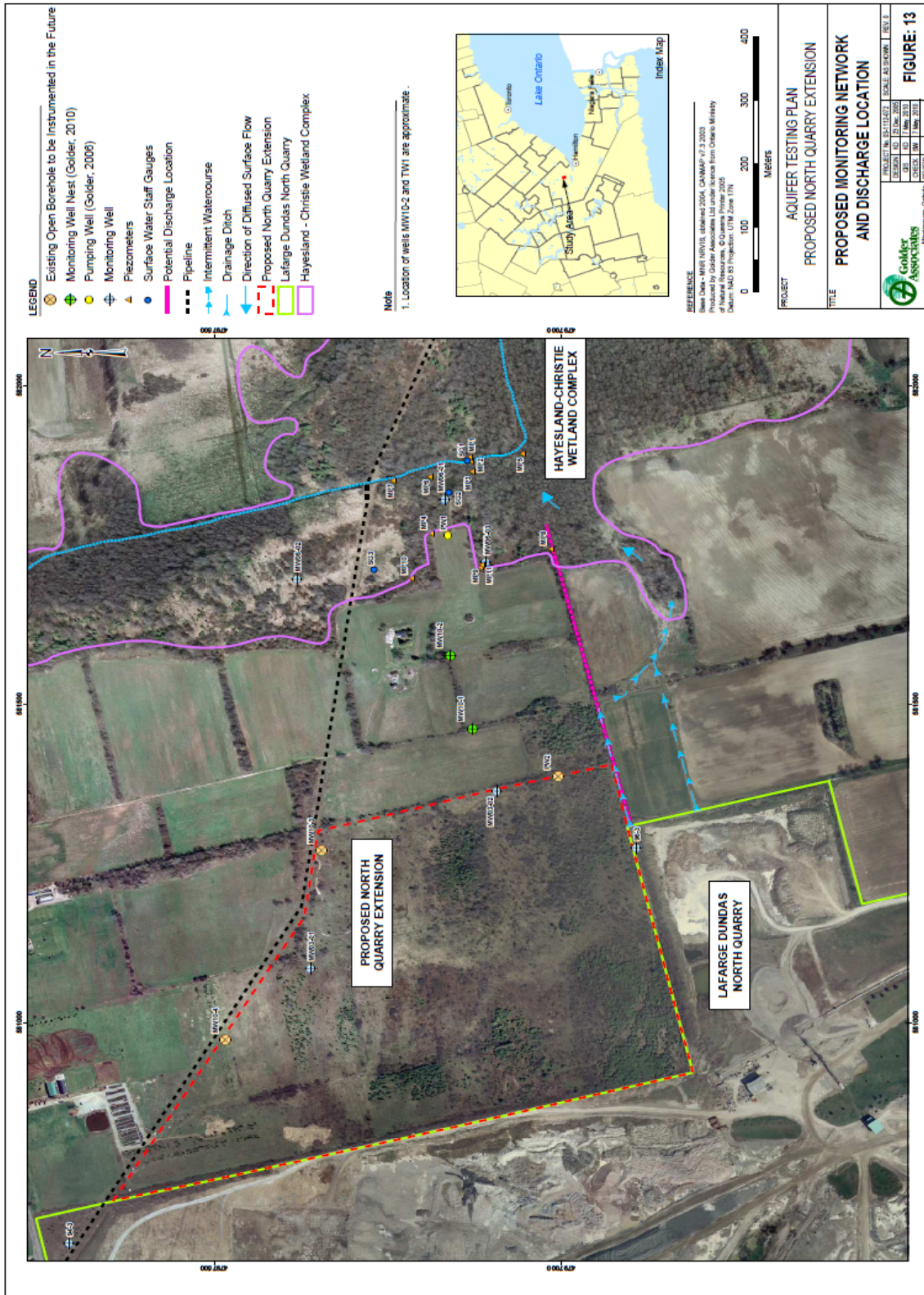
Appendix "D" (ARA Site Plan) to CART Report (Page 4 of 4)



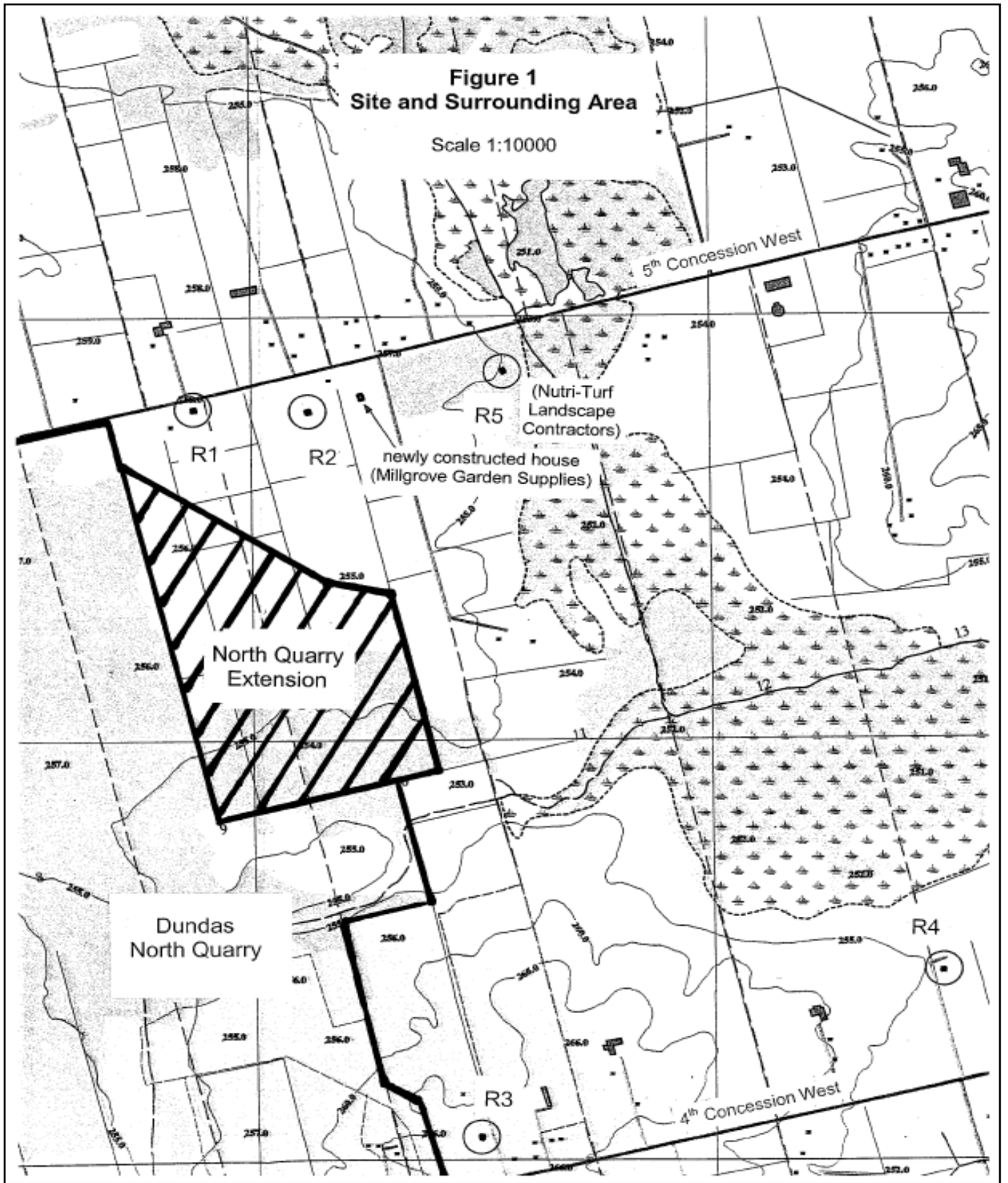
Appendix "E" (Aquatic Features Map) to CART Report (Page 1 of 1)



Appendix "F" (Regional Bedrock Geology and Elevation Map) to CART Report (Page 1 of 1)



Appendix "G" (ELC Map) to CART Report (Page 1 of 1)



Appendix "H" (Noise) to CART Report (Page 1 of 1)

Nov 10/07

ZONING AMENDMENT APPLICATION (FILE NO ZAC-07-054)

I am writing this letter with objection to the proposed Quarry extension with major concerns, my Quality of life as for a quiet neighborhood has already been ruined and now Lafarge wants to come closer to my property (HIGHLIGHTED ON MAP IN PINK)

I have cracks on my walls from Quarry blasts, and now they want to go below water to excavate aggregate this will probably have an impact on my well, I have lived on my property for 24 years without a water problem and now with added dust and noise pollution I strongly object to the extension

TELEPHONE #



Philip Ross
685 5th CONCESSION W
RR#2 WATERDOWN
L0R2H2

RECEIVED DEC 18 2017

December 17, 2007

cc: Stan Holiday

Margaret McCarthy, Ward 15
Robert Pasuta, Ward 14

We live on Ofield Road North which is the dividing line for Wards 14 and 15. Lafarge quarries are in close proximity and I have enclosed for your information the letter/information which we provided to the Ministry of Natural Resources in response to Lafarge's application for an extension of an established quarry on the 4th Concession.

We are concerned how this quarry is currently impacting our water and the implications of expanding quarry operations. As is also noted in our letter to the Ministry of Natural Resources, water is supplied to our home by a well on the property and this very dry summer we have experienced distinct sulfur odours in our water. Additional detail/comments are outlined in the attached.

This information is provided for your information.
I would also like to request that we be notified of the public meeting the city will be holding on this proposal.

Sincerely,

Christine Hils

Christine Hils
564 Ofield Road North
Dundas, ON


November 16, 2007

Diane Schwier
Aggregates Inspector
Ministry of Natural Resources
Guelph District Office
1 Stone Road West
Guelph, Ontario
N1G 4Y2
Phone: (519) 826-4930

EBR Registry Number: 010-1787
Ministry Reference Number: FSD GUE 25/07

Proponent: Lafarge Canada Inc.
**Location(s) Related to this Instrument: Part Lot 9 & 10, Concession IV,
Gerographical Township of West
Flamborough**

As residents of the Township of West Flamborough and living in the area surrounding the Lafarge quarry operation, we are impacted by the existing operation and wish to comment on this proposal by Lafarge for extension of the North Quarry.

Previously, Lafarge has had issues of concern to surrounding residents.

- In 2000 a portable asphalt plant with improper Certificate of Approval was operated in the south quarry with no prior notice to surrounding residents.
- In 2003 a noisy portable crusher operated in the south quarry and Ron Graham, quarry manager, advised that Lafarge had contracted the work to another company by the name of Strata Crush and that he was not able to respond to my request to see a Certificate of Approval for this equipment.
- The issue of excessive night time noise began in July 2001 and the situation was not improved until 2006, after constant complaints, meetings and requests. My requests for documentation of a noise study (done by Aercoustics Engineering Limited; completed and sent to Lafarge dated January 25, 2002) was dismissed by Lafarge. When obtained from another party and in meeting with Tom Bomgarten of Lafarge on June 22, 2004 he stated that they were not going to spend money to fix this noise problem because they felt it was not solely their responsibility (although it was stated in the noise study that noise mitigation is required for the Pennsylvania Crusher Lafarge). Copy of Aercoustics Engineering Limited noise study is attached.

Cont'd... /2

We have a private well and have concerns about the dewatering at the quarry and the effect it has on groundwater aquifers. For the first time this summer we have experienced a sulphur odour in our water at home. Surrounding neighbours have also experienced this sulphur odour in their well water. It has been a very dry summer and every day the water continues to flow along Ofield Road South as it drains from the Lafarge Quarry operation while all around the fields are dry. Lafarge consultant reports presume that water resources in the area will recover, and is their rehabilitation plan for the quarry, and for those people who have lost water to their private wells. We believe this water beneath the ground to be one of our most valuable resources.

The volume of truck traffic generated by Lafarge (and Dufferin Aggregates) quarries is also a concern. Our home is located on Ofield Road North and we enter and exit Highway #5 everyday. This truck traffic is both intimidating and frightening to our safety. When stopped in the turning lane to make a left turn onto Ofield Rd. there are numerous trucks passing on either side.

The production at Dufferin quarries has increased such that it has already necessitated a northbound left turn lane on Brock Rd. prior to the projected date of 2015

We can also hear the blasting that is done every afternoon at the North Quarry.

Respectfully submitted for your consideration,

Glen Hils
Christine Hils

Glen and Christine Hils
Dundas, Ontario
[REDACTED]

Encl.

Rural Hamilton Official Plan Amendment No. █

The following text constitutes Official Plan Amendment █ to the Rural Hamilton Official Plan.

1.0 Purpose and Effect:

The purpose and effect of this Amendment is to redesignate lands from “Rural” to “Mineral Aggregate Resource Extraction Area” to permit the extension of the Lafarge Canada Inc., Dundas North Quarry, on a portion of lands known as 834 Brock Road, Part of Lots 9 and 10, Concession 4, in the former Town of Flamborough.

2.0 Location:

The lands affected by this Amendment, being approximately 30.88 ha, are part of Lots 9 and 10, Concession 4, in the former Town of Flamborough, known municipally as a portion of 834 Brock Road.

3.0 Basis:

The basis for permitting this Amendment is as follows:

- The proposed amendment is consistent with the Provincial Policy Statement and conforms to the Greenbelt Plan.
- The proposed amendment has undergone a thorough technical review by the Combined Aggregate Review Team, comprising of City staff, outside agencies, and peer reviewers.

4.0 Actual Changes:

4.1 Mapping Changes:

4.1.1 Schedules

- a. That Schedule D – Rural Land Use Designations be amended by redesignating the subject lands from “Rural” to “Mineral Aggregate Resource Extraction Area”, as shown on Appendix “A” to this amendment.

Schedule "1"

5.0 Implementation:

A Zoning By-law Amendment will give effect to this Amendment. The approval of the proposed quarry will be implemented through a License under the Aggregate Resources Act.

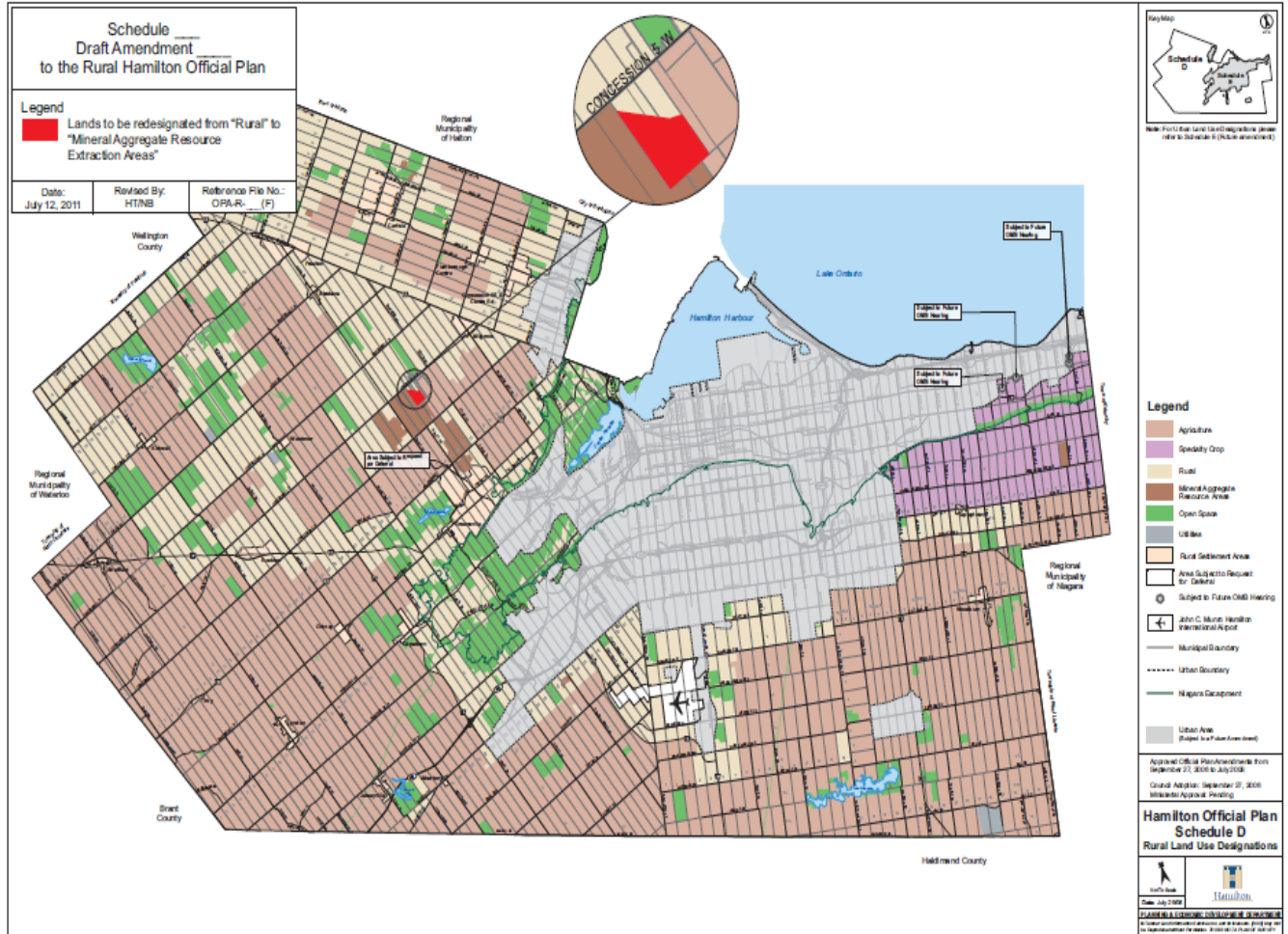
This is Schedule "1" to By-law No. ■■ passed on the ■■ day of ■■, 2011.

**The
City of Hamilton**

R. Bratina
MAYOR

Rose Caterini
CLERK

Schedule "1"



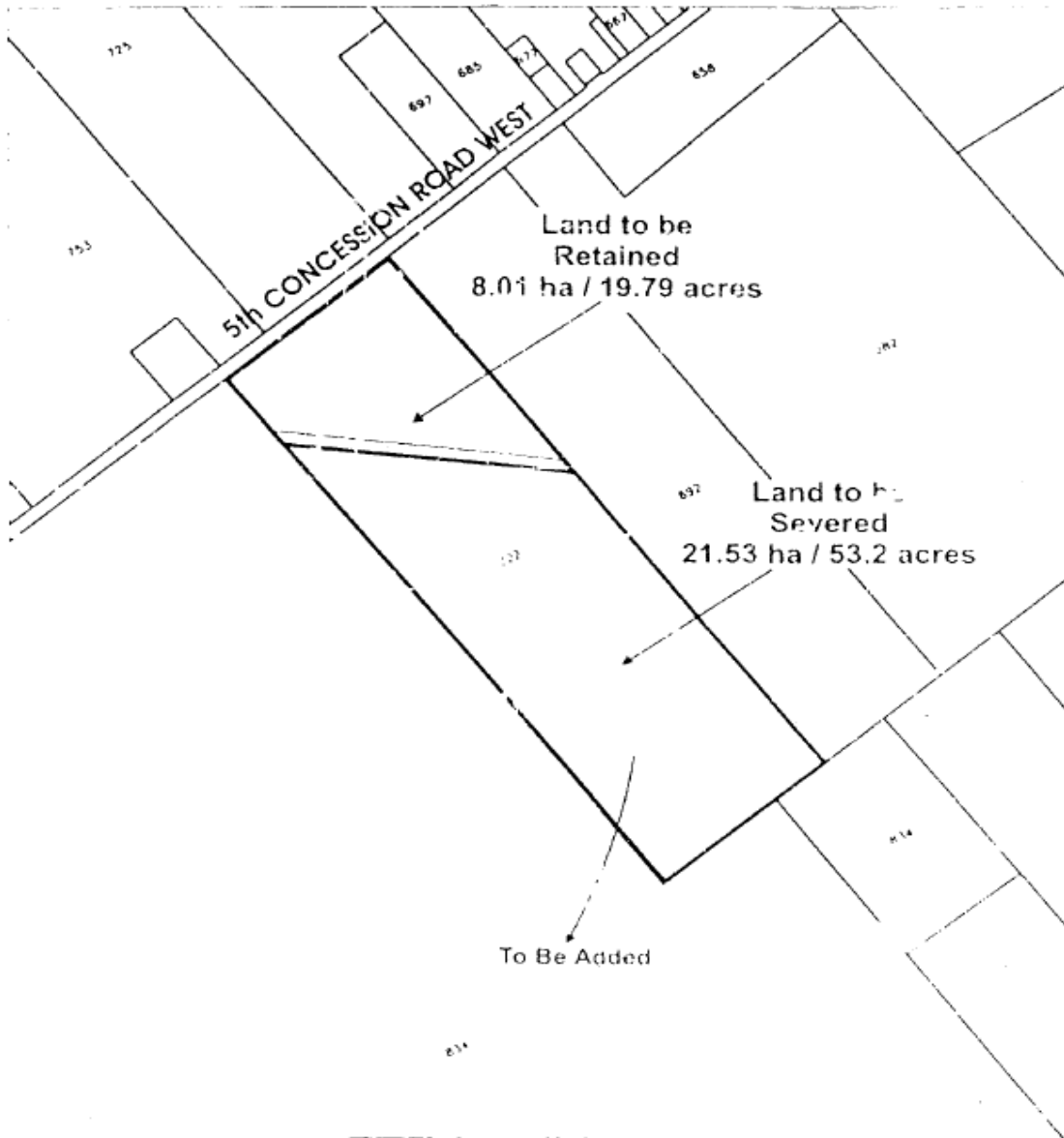
CITY OF HAMILTON
COMMITTEE OF ADJUSTMENT



PLAN SHOWING
PART OF LOT 9 & 10, CON 4.
722 Concession 5 West, 30241050600
FORMERLY TOWNSHIP OF (WEST FLAMBOROUGH)
TOWN OF FLAMBOROUGH
NOW IN THE
CITY OF HAMILTON

FILE No: FL/E-03-68
DATE: May 9, 2003
SCALE: N.T.S.

Page 2 of 2



CITY OF HAMILTON
COMMITTEE OF ADJUSTMENT



PLAN SHOWING
PART OF LOT 10, CON 4,
692 Concession 5 West, 30241050800 0040
FORMERLY TOWNSHIP OF (WEST FLAMBOROUGH)
TOWN OF FLAMBOROUGH
NOW IN THE
CITY OF HAMILTON

FILE No: FL/B-03-69
DATE: May 9, 2003
SCALE: N.T.S.

Page 2 of 2

